

Keweenaw Bay Indian Community
Application for Programmatic Approval under Section 303 of the Clean
Water Act



Submitted to:
U.S. EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

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I. INTRODUCTION

The Keweenaw Bay Indian Community (KBIC) Lake Superior Band of Chippewa hereby requests authorization pursuant to the Clean Water Act (CWA) and submits the following information to fulfill the requirements as specified by the CWA, section 518 (33 U.S.C. §1377(e)) and 40 CFR §131.8 (a) for the purpose of programmatic approval to obtain Treatment as a State (TAS) authority and establish a water quality standards (WQS) program for KBIC's L'Anse Reservation ("Reservation") under CWA §303 and the certification program found at CWA §401 (33 U.S.C. §§1313 and 1341 respectively).

II. FEDERAL RECOGNITION

Regulations at 40 C.F.R. §131.8(a)(1) and 40 C.F.R. §131.8(b)(1) require KBIC to be recognized by the federal government as an Indian Tribe. Evidence that KBIC is a federally recognized Indian Tribe includes, but is not limited to:

- A. KBIC's historic and current relationship with the federal government. KBIC is the successor in interest of the L'Anse and Ontonagon Bands of Lake Superior Chippewa Indians, signatories to two treaties with the United States of America, the 1842 Treaty with the Chippewa (7 Stat. 591), and the 1854 Treaty with the Chippewa (10 Stat. 1109) (Appendix A). Article II of the Treaty of 1854 established the boundaries of the Reservation (See boundary map at Appendix B).
- B. The Department of Interior's published list of federally recognized tribes which includes KBIC (See 67 FR 46328-01 at Appendix C).
- C. The collective rights of KBIC and its members both on-Reservation and within the territories ceded to the United States through the treaties of 1842 and 1854 have been recognized by the State of Michigan and the federal courts providing further evidence of KBIC's recognition as an Indian tribe. (See; *People v. Jondreau*, 384 Mich. 539, 185 N.W.2d 375 (1971), see also *Keweenaw Bay Indian Community v. State of Michigan*, 784 F.Supp. 418, (W.D. Mich. (Feb. 28, 1991)).
- D. Established an ongoing assistance, grant, and contract relationships between KBIC and various departments of federal government through which the federal government recognizes KBIC as an Indian tribe. These relationships include a Self Determination Act Compact and Contract programs with the Department of the Interior, Bureau of Indian Affairs (BIA).

- E. Since 1936 KBIC has been organized as a government pursuant to Section 16 of the Indian Reorganization Act, 25 U.S.C. §476. KBIC's Constitution and Bylaws (Constitution) were adopted by the tribal membership and approved by the Secretary of the Interior in 1936 (Appendix D). Approval of the Constitution and Bylaws by the Secretary of the Interior constitutes acknowledgment by the federal government that KBIC is a federally recognized Indian tribe.

III. GOVERNMENTAL BODY AND ITS DUTIES AND POWERS

Regulations at 40 C.F.R. §131.8(a)(2), 40 C.F.R. §131.8(b)(3) require KBIC to: A) Identify the source of the KBIC governmental authority to carry out governmental functions; B) provide a description of the KBIC government; C) demonstrate that KBIC has a governing body that is currently carrying out substantial governmental duties and powers and provide a description of the types of governmental functions performed. The following provides the required information:

A. Source of Authority

The authority of KBIC to govern its members and activities within its territory comes from KBIC's Constitution, adopted under Section 16 of the Indian Reorganization Act of June 18, 1934 (Appendix D). The Constitution adopted by KBIC's members was approved by the Secretary of the Interior in 1936. The Constitution also includes two amendments approved by the Secretary of the Interior on October 3rd and 23rd, 2002 respectively.

In addition to the authority provided through the Constitution, the authority of KBIC to govern its members and others activities within its territory comes from the inherent sovereignty of KBIC as an Indian tribe. (See *Worcester v. Georgia*, 31 U.S. 515, at 559 (1832). This authority was reconfirmed in *United States v. Wheeler*, when the U.S. Supreme Court determined, "Although physically within the territory of the United States and subject to ultimate federal control, they nonetheless remain a separate people, with the power of regulating their internal and social relations... The powers of Indian tribes are, in general, 'inherent powers of a limited sovereignty which has never been extinguished.'" *United States v. Wheeler*, 425 U.S. 313, at 322, 98 S.Ct. 1079 at 1085-1086 (1978) quoting F. Cohen, Handbook of Federal Indian Law at pg. 122 (1945).

B. Form of Government

KBIC's Constitution at Article III section 1, provides that KBIC be governed by a Tribal Council. The Tribal Council consists of twelve members elected by the tribal membership residing on-

Reservation. Two voting districts exist, the L'Anse and Baraga districts, and from each of these two districts six council members are elected by the membership residing within that district. (See Constitution Art. III sec. 1 at Appendix D.)

The Tribal Council, per its Constitutional authority, has established a number of administrative boards, committees, and task forces, which address specific needs of the government and community. (See Constitution Art. IV. at Appendix D.) These include the Drug Task Force, Education Committee, Natural Resource/Forestry Committee, Cultural Committee, Youth Committee, Health Board, Economic Development Committee, Committee for Alternative and Renewable Energy (CARE), Parks and Recreation Committee, Pow-wow Committee, Canal Lands Task Force, Constitutional Task Force, and others. Boards, committees, and task forces are supervised by and report to the Council President or to the Tribal Council. Additional boards and task forces may also be established, from time to time, to address specific needs. (See Appendix F.)

In 1965 the Council created the Ojibwa Housing Authority (OHA) and Board of Commissioners. OHA is the Tribally-Designated Housing Entity of KBIC and was created to meet housing and employment needs of KBIC members on the reservation. The OHA also provides emergency assistance, prescription subsidy, waste management, small business loans, home improvement loans, financial education, tax preparation, and homebuyer training.

In 1973, the Tribal Council, as authorized by the Constitution under Article VI, sec. 1(I), established a Tribal Court for the purpose of administering justice. The Tribal Court is an independent branch of the KBIC government, and interprets the laws and ordinances passed by the Tribal Council. These laws and ordinances are compiled in codified form in the KBIC Tribal Code (Appendix E). The Court exercises criminal jurisdiction over KBIC tribal members and members from other federally recognized tribes within the boundaries of the Reservation. Criminal jurisdiction over tribal members extends to the ceded territories for hunting, fishing, trapping, and gathering regulations. (See Appendix G at sections 10.101(12) and 10.104.) The Court also exercises civil jurisdiction over all civil matters involving Indians within the boundaries of the Reservation and select civil jurisdiction over non-Tribal members within the Reservation boundaries.

In 1975 the Council chartered the Keweenaw Bay Ojibwa Community College (KBOCC) through Ordinance No. 75-1, as an independent non-profit educational corporation, allowing KBOCC to establish and operate institutions granting post-secondary degrees and certificates, and to coordinate and regulate higher education on the reservation. KBOCC operations are directed by a Board of Regents. Currently KBOCC offers associate degree programs in Early Childhood Education, Liberal Studies, Liberal Studies with Native American Emphasis, and Environmental Science. Vocational education programs are also offered in a variety of fields through community enrichment programs. KBOCC also operates a public library.

C. Governmental Duties and Functions

The KBIC Government currently employs approximately 300 people and performs essential government functions on-Reservation and within the ceded territories. The Tribal Council has delegated the day to day government operations' administrative authority and duties to the offices of the President and Chief Executive Officer, who head the executive branch of the KBIC Government. Government structure, boards, committees, and task forces are presented in Appendix F. Examples include, but are not limited to:

1. Hunting, Fishing, Trapping, and Gathering activities: Per its authority, the Tribal Council adopted Title 10, Hunting, Fishing, Trapping, and Gathering for the purpose of preserving and protecting hunting, fishing, trapping, and gathering rights, which were reserved by KBIC in the Treaties of 1842 and 1854 for future generations of tribal members. KBIC Law Enforcement Officers have the authority to issue citations for violations of Title 10, and the Tribal Prosecutor prosecutes these violations in Tribal Court (Appendix G).
2. Water Supply and Wastewater Systems: KBIC supplies water to 113 tribal residences and several government offices within the community of Zeba through the Zeba Water Plant. In addition, KBIC supplies water to 40 tribal residences on KBIC trust land holdings in Marquette County through the Kawbawgam Road Water Plant. KBIC and the United States Geological Survey (USGS) partnered on development of Source Water Assessment and Protection Plans for the Zeba Community Water Supply System and the Kawbawgam Road Community Water Supply System in 2003 (Appendix H). KBIC also operates and maintains wastewater lines and systems, portions of which are managed cooperatively with the Village of L'Anse and Baraga.
3. Household Solid and Hazardous Wastes: KBIC conducts bulky waste 'Spring Cleanup' events each spring and conducts household hazardous waste and electronic waste collections as funding is available (Appendix I). Future plans include construction of a solid waste transfer station to provide solid waste collection and disposal services for tribal members and non-tribal residents of Baraga County, and establishing a household hazardous waste storage facility with recycling adjacent to the transfer station to utilize during collection events.
4. Natural Resources Department: The KBIC Natural Resource Department (KBNRD) was formally organized in 1999. The department currently consists of seventeen full time employees and is responsible for assisting KBIC with protection, preservation, enhancement, and mitigation of natural resources and the environment, an obligation which it fulfills through a variety of programs (See Section V.A.1.a). KBNRD also formulates natural resource and environmental policy for consideration by the President and Tribal Council. In

addition, KBNRD provides for various types of environmental services and technical assistance to the government.

5. Tribal Conservation District: On October 25, 2001, the KBIC Tribal Council passed Resolution KB-1020-2001 which “directs the Tribal Council Chairman to execute a mutual agreement with the United States Secretary of Agriculture for cooperative conservation of natural resources”. Following passage of Resolution KB-1020-2001 KBIC and the USDA developed and approved cooperative working agreements to implement natural resource and conservation programs. In addition to Resolution KB-1020-2001, the Tribal Council adopted the KBIC Conservation District Act, establishing the KBIC Conservation District “to engage in conserving and enhancing soil, water, air, animal and plant resources,” and to establish the Keweenaw Bay Natural Resource Committee for such purposes. (Relevant Conservation District documents are included in Appendix J.)
6. Integrated Resource Management: As part of KBIC’s commitment to enhancement, preservation, and protection of existing resources the Tribal Council adopted the Integrated Resources Management Plan (IRMP: Resolution KB-1152-2003) on February 12, 2003. (Appendix K). The IRMP was subsequently approved by the BIA. This Plan provides guidance on sustainable resource use, resource enhancement, and envisions the preservation of resources for the next seven generations. The IRMP provides resource management guidance for environmental, cultural, fisheries, wild rice, native plants, wildlife, wetlands, forestry, recreation, soil, and water quality. The IRMP also provides additional guidance for enforcement management, economic development, roads and transportation, land acquisition, partnerships, and education.
7. Social Services: The Social Service Department provides Indian residents with services through programs including Prevention Services, Child Protective Services, Foster Care Services, Reunification Services, Indian Child Welfare Act Services, Juvenile Justice Services, and Elder/Adult Protective Services.
8. Public Works Department: The Public Works Department provides for community water supply operation, road construction and maintenance, energy auditing and efficiency improvements, wastewater and septic system maintenance, building operation and maintenance, various construction services, and other infrastructure and operational needs of KBIC.
9. Community Assistance Program (CAP): CAP provides Indian residents with assistance through programs that include General Assistance, Heating Assistance, and the Tribal Senior or Disability Supplemental Income Plan.
10. Strategic Plan: In 2005, following an intensive tribal membership survey and participation process, KBIC adopted a Strategic Plan for government operations

(Appendix I). The Strategic Plan provides a framework that communicates the tribal membership's visions, goals, and objectives, and establishes actions and timelines for the government to meet those goals and objectives to achieve the membership's visions.

11. Tribal Law Enforcement: Tribal Law Enforcement provides for the enforcement of Tribal and Federal laws on Reservation lands in Ontonagon, Marquette, and Baraga Counties. This includes enforcement of Title 10, KBIC's Hunting, Fishing, Trapping, and Gathering Ordinance.
12. Boards and Committees: As described in Section III(B), a number of Boards, Committees, and Task Forces have been created to assist the government and the membership with various issues.
13. Education: The Education Department's services include providing scholarships and assistance to tribal member college students. The Education Department also coordinates a summer student internship program for KBIC member college students.
14. Health Department: The Health Department's programs and services include community health representatives, contract health services, a dental clinic, a diabetes program, a domestic violence prevention program, a healthy start program, a pharmacy, and health services provided through the medical clinic located in Baraga, Michigan (Appendix M). Health Department programs are funded through a combination of Self Determination Act compact funding, grant funds, and KBIC General Revenue funds.
15. Office of Child Support Services (OCSS): OCSS provides services to tribal members to establish paternity, establish, monitor, modify and enforce child support orders, and locate custodial and non-custodial parents.
16. Tribal Court System: The Court consists of a Chief Judge, an Associate Judge, a Chief Clerk, Deputy Clerk, two Probation Officers, and a Court Advocate. The Court schedules cases for any day of the work-week. Along with the Criminal Docket, the court also hears civil cases, probate cases, juvenile delinquency cases, dependency and neglect cases, divorce cases, and guardianships and conservatorships. Hunting, fishing and trapping violations both criminal and civil in nature are also heard in the Trial Court. The Court also maintains a law library with materials available to the public. Appeals from the Trial Court are heard by the Appellate Division of the Tribal Court which is a separate three judge panel from the Trial Court. KBIC has also started a Drug Court with funding from the Bureau of Justice Assistance. It is designed for people whose problems stem from substance abuse. It is a voluntary and intensively supervised treatment

program that requires the participant to be motivated toward changing their lifestyle and become free from alcohol and drugs.

17. New Day Treatment Facility: KBIC's New Day Treatment Center is a licensed facility that offers residential substance abuse treatment services for tribal members.
18. Tribal Enterprises: KBIC owned and operated enterprises include the Ojibwa Casinos in Baraga and Marquette, Big Bucks Bingo Hall, the Ojibwa Resort Motel, the Pressbox Lanes and Lounge, two radio stations (WCUP-FM and WGLI-FM), the Pines Convenience Center gas station and convenience store, and a campground and marina. These enterprises provide revenue for government services and employment for tribal and non-tribal members. KBIC enterprises employ approximately 400 people.
19. Beartown Firefighters: KBIC, in cooperation with the Bureau of Indian Affairs, manages a Type 2 Wildland Firefighting hand crew. The crew is based out of Baraga, Michigan, and is available for dispatch both locally and nation-wide. The Beartown Firefighters provide employment and training opportunities for KBIC members.
20. Seniors: KBIC operates and maintains a Senior Center on the Reservation. KBIC also provides a number of other assistance services to tribal seniors such as heating assistance, snow shoveling, meals, and cultural activities.
21. Forestry: The Keweenaw Bay Indian Community's forests have been previously been managed by the Bureau of Indian Affairs and guided by the Tribe's Forest Management Plan. In February 2013, the Tribal Council made a motion to create a KBIC Forestry Department and to hire a Tribal Forester to manage the Tribal forests. The current Tribal Forester is in position and carrying out forest management duties. The Tribal Forester has also been managing a community sugar bush that is operated on reservation and is open to all community members. Commercial harvests and forest development projects are taking place on an annual basis providing job opportunities and economic benefits to the community while incorporating cultural values, wildlife considerations, soil integrity and water quality.
22. Accounting: KBIC has an in-house accounting department. They maintain the budgets for all KBIC departments and enterprises. This includes grant draw down and withdrawal from the general funds.
23. Realty: KBIC's Real Estate Department has existed since the early 1980's and is responsible for management of the Tribe's land holdings in terms of

development of government infrastructure; promoting home ownership, hunting, fishing and gathering activities, as well as entrepreneurial opportunities through the leasing of tribal lands to its members for residential, recreational and commercial purposes. The Department is also charged with the acquisition of land and infrastructure on behalf of the Community, withdrawal of tribal exempt properties from the State's property tax rolls, providing services to members in the form of property line delineation, deed preparation, and various other real estate activities. Development of a Land Use Plan is underway utilizing input from multiple departments, multiple existing resource plans and community members. The Tribe currently employs a GIS Project Manager within the Real Estate Department whose responsibility is to develop and maintain a web based GIS Enterprise system.

24. Licensing: KBIC has its own licensing department at the Tribal Center. They handle licensing of motor vehicles, ATVs, trailers and boats. They also handle licensing for hunting, fishing, trapping, baiting and commercial fishing.

IV. AUTHORITY TO REGULATE WATER QUALITY

Regulations at 40 C.F.R. §131.8(b)(3) require KBIC to provide a descriptive statement of its authority to regulate water quality, including a map or legal description of the area over which KBIC asserts authority to regulate surface water quality, a statement which describes KBIC's assertion of authority and copies of documents which support this assertion of authority, and identification and description of the surface waters for which KBIC proposes to establish water quality standards. Additional EPA requirements for assertion of authority include providing information to show authority over nonmember activities using guidelines established in *Montana v. United States*, 450 U.S. 544 (1981) by describing the significance of water to KBIC and providing evidence demonstrating that existing and potential nonmember activities within the Reservation affecting water quality have or may have serious and substantial direct impacts on the political integrity, economic security, or the health and welfare of KBIC. (See the EPA's Strategy for Reviewing Tribal Eligibility Applications to Administer EPA Regulatory Programs, EPA Memorandum, January 23, 2008, Marcus Peacock, Deputy Administrator.)

This section contains: A) a description of the area over which KBIC is asserting authority for establishing water quality standards; B) information demonstrating KBIC's authority including authority over non-members; C) a description of the Reservation setting and waters, and the significance and use of Reservation waters by KBIC members and government; D) information regarding current water quality impairments and information regarding existing and potential non-member activities within the Reservation that threaten water quality; E) information supporting KBIC's authority to regulate water quality for the Reservation; F) copies of documents which support KBIC's assertion of authority, and G) surface waters for which KBIC intends to set water quality standards.

Submittal of this application by KBIC does not in any way diminish KBIC's sovereign government to government relationship with the United States government or agencies thereof. KBIC reserves the right to assert authority to regulate water quality for additional areas not included in this application at a future time.

A. Area over Keweenaw Bay Indian Community Asserts Authority specific to this Application.

Through submittal of this application KBIC is applying for TAS designation to establish surface water quality standards and regulate surface water quality on the lands within the federally recognized boundaries of the L'Anse Reservation. A map of the Reservation boundaries can be found at Appendix B.

The Reservation was established through the signing of the 1854 Treaty with the Chippewa. The 1854 Treaty description of the Reservation area is as follows:

"For the L'Anse and Vieux De Sort bands, all unsold lands in the following townships in the State of Michigan: Township fifty-one north range thirty-three west; township fifty-one north range thirty-two west; the east half of township fifty north range thirty-three west; the west half of township fifty north range thirty-two west, and all of the township fifty-one north range thirty-one west, lying west Huron Bay." (Appendix A at Art. 2.)

The legal description of the L'Anse Reservation is as follows:

"Township fifty-one north range thirty-three west; township fifty-one north range thirty-two west; the east half of township fifty north range thirty-three west; the west half of township fifty north range thirty-two west, and all of township fifty-one north range thirty-one west, lying west of Huron Bay." (Appendix B.)

The boundaries of the Townships, also being the Reservation boundaries, were originally surveyed between the years of 1845-1850 and have since been updated. The most recent survey work was completed during the 1980's. Surveys in the 1980's were performed to re-establish corners and boundaries established in the 1840's, make any necessary corrections, and establish corners that were not previously established.

The Reservation boundaries encompass approximately 59,071 acres of land of which 19,275 acres, approximately 32%, is tribal land. Current ownership is shown in Appendix N. KBIC has an active land acquisition program to re-acquire ancestral lands within the Reservation boundaries. Over the last 5 years, KBIC has acquired an average of 113 acres per year through this program. Current Reservation land ownership consists of:

- 17,769 acres are held in trust for KBIC or its members, or directly owned by the tribe.

- 1,506 acres are owned by KBIC members (simple fee land)
- 124 acres are owned by the Village of L'Anse
- 106 acres are owned by the Village of Baraga
- 16,377 acres are owned by Plum Creek (commercial timber)
- 891 acres are owned by the State of Michigan.
- 2,167 acres are owned by Heartwood Forest (commercial timber)
- 756 acres are owned by GMO (commercial timber)
- 19,321 acres of private holdings for which ownership information was lacking at the time of submittal. Most of this acreage is likely smaller privately held parcels.

B. Basis of Authority to Regulate Water Quality

1. Inherent Sovereign Authority

KBIC's authority to set water quality standards for the entire Reservation comes from KBIC's sovereign power to protect all persons within the Reservation boundaries and to preserve the common welfare and existence of the tribe. This authority is part of the inherent sovereign authority that has existed since ancient times, recognized in the Treaty of 1854 and affirmed within the KBIC Constitution.

The inherent sovereign authority is recognized in the Indian Commerce Clause of the United States Constitution which is used by the federal government to guide the government-to-government relationship between the federal government and Indian tribes. (U.S. Const. art. I, sec. 8, cl. 3.) Inherent sovereign authority is also acknowledged in the Indian Reorganization Act of 1934, and has been consistently reaffirmed by the U.S. Supreme Court in court decisions over time.

2. Treaty of 1854

KBIC authority over its Reservation was recognized by the United States government in the Treaty of 1854, in which KBIC reserved to itself the territory and resources within the Reservation in exchange for some of KBIC's interest in other land in the western Upper Peninsula of Michigan, the main exception being KBIC's reservation of usufructuary rights to hunt, fish, trap, and gather natural resources throughout both ceded and reserved areas.

3. Keweenaw Bay Indian Community Constitution

Since 1936 KBIC has been organized as a constitutional government under the Indian Reorganization Act. KBIC's Constitution was adopted by the tribal membership and approved by the Secretary of the Interior in 1936. The Constitution asserts KBIC's sovereign powers and authority over all lands within the boundary lines of the Reservation established by the Treaty of 1854. The Constitution provides the Tribal Council the authority to "...to protect and preserve the tribal property, wild life and natural resources of the Community, to cultivate Indian arts, crafts and culture, to administer charity, to protect the health, security, and the general welfare of the Keweenaw Bay Indian Community." (See Appendix D. at Const. Art. IV, sec. 1, cl. a.) The Constitution also provides the Tribal Council the authority "...to promulgate and enforce ordinances which are intended to safeguard and promote the peace, safety, morals, and general welfare of the Keweenaw Bay Indian Community by regulating the conduct of trade and the use and disposition of property upon the reservation, providing that any ordinance directly affecting non-members shall be subject to review by the Secretary of the Interior", and "...to adopt resolutions or ordinances to effectuate any of the foregoing powers." (Appendix D. at Art. VI. sec. 1 cls. n and u.) The Constitution was approved by the Secretary of the Interior in 1936 according to the terms of the Indian Reorganization Act. Approval of the KBIC Constitution by the Secretary of the Interior constitutes federal recognition of KBIC's authority to regulate the use of both tribal and non-tribal lands and both tribal and non-tribal member activities within the Reservation boundaries, which is clear authority to regulate water quality for all lands within the Reservation.

4. Authority to Regulate Waters on Non-Indian Owned Fee Land, Threats to the Political Integrity, Economic Security, and the Health and Welfare of the Tribe.

Section 51 (e)(2) of the CWA confirms that EPA is authorized to treat an Indian tribe, and thus is authorized to treat KBIC, as a State for purposes of title II and sections 104, 106, 303, 305, 308, 309, 314, 319, 401, 402, 404, and 406 of the CWA to the degree necessary to carry out the objectives of §518(e)(2), if the Indian tribe has a governing body carrying out substantial governmental duties and powers; the functions to be exercised by the Indian tribe pertain to the management and protection of water resources which held by an Indian tribe, held by the United States in trust for Indians, held by a member of an Indian tribe if such property interest is subject to a trust restriction on alienation, or otherwise within the borders of an Indian reservation; and the Indian tribe is reasonably expected to be capable, in the Administrator's judgment, of carrying out the functions to be exercised in a manner consistent with the terms and purposes of this Act and of all applicable regulations. Material included within this application demonstrate that KBIC meets the requirements of Section 518 (e)(2).

The EPA has previously acknowledged that KBIC meets the eligibility requirements for TAS. Section 106 of the CWA provides for grants from the U.S. EPA to Indian tribes to assist a tribe in carrying out an effective water pollution control program. Federally recognized Indian Tribes meeting the requirement for TAS, as set forth under Section 518 (e) of the

CWA are eligible for these grants. In 1993 EPA acknowledged that KBIC met the necessary eligibility requirements to receive funding under Section 106 of the CWA, recognizing that KBIC meets the requirements for TAS eligibility. (Appendix O)

KBIC's authority to regulate all Reservation waters includes the authority to regulate waters contained within, or flowing through, non-tribal owned fee lands within the Reservation as noted in Section IV.B.3 of this application. The U.S. Supreme Court recognizes that tribes retain such authority where the behavior to be regulated "threatens or has some direct effect on the political integrity, the economic security or the health and welfare of the Tribe," or with express Congressional delegation. (*Montana v. United States*, 452 U.S. 911, 101 S.Ct. 3042 (1981).)

The EPA has previously recognized and courts have confirmed that tribes have sufficient regulatory authority over both tribal members and non-members engaged in activities on Indian reservations to allow for establishment of tribal water quality standards and certification programs. (See *Wisconsin v. EPA*, 266 F.3d 741 (7th Cir.2001) cert. denied; *Montana v. EPA*, 137 F.3d 1135, 1141 (9th Circuit 1998); *City of Albuquerque v. Browner*, 97 F.3d 415 (10th Cir. 1996).)

Pollution of waters within the Reservation boundaries is a threat to the political integrity, the economic security, and the health and welfare of KBIC. Tribal members use and depend upon quality water for a variety of purposes including fishing, trapping, swimming, boating, gathering, drinking, bathing, general residential use, and for spiritual and cultural purposes as they have since ancient times. The relationship for tribal members between land and water resources and area ecosystems is part of the KBIC identity. Significant and substantial threats to L'Anse Reservation waters are present and can be demonstrated. Without control over our water resources, and by extension the natural resources which require quality water for continued existence, KBIC's political control, economic security and health and welfare are threatened. In other words, threats to water quality threaten the very essence and existence of the KBIC. The threats to KBIC waters and resources and the significance of those threats are described in the narrative which follows.

C. Water Resources of the Keweenaw Bay Indian Community's L'Anse Indian Reservation and their Significance.

Waters and Designated Uses

Surface waters for which KBIC intends to establish water quality standards include all waters within the Reservation boundaries which consist of approximately 80 miles of streams and rivers, 49 miles of intermittent streams, 164 small lakes and ponds totaling approximately 259 surface acres, and approximately 3000 acres of wetlands. (Appendix B and P.) A map of surface waters, a list of surface waters, proposed designated uses, draft water quality standards and water resource information is provided in Appendix P.

The following are the designed uses which KBIC proposes to apply to surface waters of the Reservation:

Cold Water Fishery (CW): Waterbodies containing aquatic communities that thrive in relatively cold water or areas which serve as spawning or nursery habitat or areas of overwintering for any cold water fish species.

Warm Water Fishery (WW): Waterbodies containing aquatic communities that thrive in relatively warm water or serve as spawning or nursery habitat for warm water fish species.

Wetland (T): Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in hydric soils.

Wildlife Use (W): Any waters that are capable of providing a water supply, riparian habitat and/or provides for a major dietary food source for the support and propagation of indigenous terrestrial or aquatic wildlife within the Reservation.

Recreational Use: Primary Contact (R¹): The recreational use of any water body which involves prolonged direct contact with water to the point of complete submersion and involves the risk of incidental ingestion of water in quantities sufficient to pose a potential health risk. Secondary Contact (R²): The recreational use of any water body where direct contact may but need not occur and does not normally involve immersion including the head nor the incidental ingestion of water.

Ceremonial, Religious, or Spiritual Use (S): To protect and provide for the sacred relationship that exists between the Ojibwa people of the Keweenaw Bay Indian Community and their waters, this use includes, but is not limited to, any ceremonial use of water, water-borne based religious practice or spiritual belief of a water body. This use also provides for ceremonies and other activities such as, but not limited to, the Sturgeon Feast, the “Breaking of the Water” ceremony, and any religious prayers or blessings practiced by the people of the Keweenaw Bay Indian Community.

Cultural Uses (C): Waters which are suitable or potentially suitable for cultural, historical or heritage uses by the Ojibwa people of the Keweenaw Bay Indian Community. This includes practices such as, but not limited to, the growing and subsequent harvest of wild rice, harvesting of any aquatic riparian flora or fauna for medicinal purposes, taking of water for use in traditional ceremonial healing practices and historical feasts.

Navigational Use (N): Applies to all navigable waters. Includes any waterway that has been used, or is susceptible for use by itself or in connection with other waterways, for the transportation of cargo, crew, or use as a highway of commerce.

Public Drinking Water Supply Use (P): Any raw surface water source that, after conventional treatment, provides as a source of safe water for various uses, including but not limited to, human consumption, cooking, food processing, and in food preparation or as an ingredient in foods and beverages.

Agricultural and/or Industrial Use (A): Use of water for agricultural purposes including irrigation of crops, livestock watering, grazing, farming, ranching, and the support of vegetation. Also, the use of water industrial cooling and processing purposes.

Reservation Setting

The Reservation is the primary land base of KBIC and is situated in the northwest portion of Michigan's Upper Peninsula (UP) near the southern terminus of Keweenaw Bay of Lake Superior, in Baraga County. (Appendix B.) Terrain within the boundaries of the Reservation is generally hilly with steep slopes rising away from the Keweenaw Bay shore. Elevation ranges from 183 m at Keweenaw Bay to about 550 m. in the most southeastern section of the Reservation. (Appendix P.) Within the Reservation boundaries are all or part of three state incorporated townships: L'Anse, Baraga and Arvon Townships, and two state incorporated villages: L'Anse and Baraga. Approximately 99% of the Village of Baraga and 13% of the Village of L'Anse lie within the Reservation boundaries.

Much of the Reservation is forested. Forest types include hardwood conifer swamps, northern cedar swamps, northern conifer bogs, hardwood and northern maple-mixed forest, northern hemlock forest, pine, aspen, and rarer oak dominant areas. Some areas are intensively managed for either commercial aspen or pine production.

The Reservation lies predominantly within the Dead-Kelsey watershed (HUC 04020105). Part of the northwestern area reservation lies within the Sturgeon watershed (HUC 04020104). The Dead-Kelsey and the Sturgeon are located in the Southern Lake Superior-Lake Superior sub region (HUC 0402) of the Great Lakes Water Resource Region (HUC 04). All waters in and around the Reservation flow towards, and discharge into Lake Superior. Sub watersheds wholly or partially within the Reservation boundaries include East Branch Silver River, Silver River, Falls River, Sturgeon River, and several small sub watersheds including Zeba Creek, Little Carp River, Linden Creek, Kelsey Creek, and others, which drain smaller sized areas into Lake Superior. The area encompassed by many of the smaller sub watersheds is often referred to as Lake Drainage or Lake Frontal. (Appendix P.) According to USDA Forest Service analysis of private forest lands and their ability to produce clean water supplies, the Dead-Kelsey and the Sturgeon River watersheds, which are heavily forested, both rank very high (Appendix P). U.S. EPA general assessment for the waters within the Dead-Kelsey watershed list the Falls River, Kelsey Creek, Linden Creek, Little Carp River, and Silver Rivers as unimpaired with good quality. (Appendix P.)

Rivers and Creeks

Three streams drain most of the Reservation area. The Little Carp River drains most of the western Reservation area, while the Silver River and Falls River and associated tributaries drain most of the eastern Reservation area.

The Silver River and East Branch Silver River watersheds total approximately 39,570 acres in size with the main Silver River and the East Branch watersheds being approximately equal in acreage. Silver River and East Branch Silver River tributaries include Gomanche Creek, Kalio Creek, Paiges Creek, Dakota Creek, and Pekala Creek. Much of the watershed is forested and undeveloped. Access to the Silver River, especially the upper portions of the watershed can be difficult due to the undeveloped nature of the area and steep topography.

Much of the land in the watershed is used for commercial timber purposes although some scattered seasonal camps are present. One mining exploration company is actively characterizing a metallic sulfide ore body in one location within the watershed. This is further discussed below. Over the past 10 years intensive commercial logging in the watershed has removed or significantly reduced much of the tree canopy and vegetative cover, which may be changing storm water and seasonal runoff patterns.

Altitude of land surface ranges from about 602 feet MSL at the mouth to about 1,900 feet MSL near Page Creek, in the eastern portion of the watershed. The upper portions of the watershed are characterized by high gradients with numerous gorges, falls, and rapids running through bedrock substrate. Much of the upper portions can be generally characterized as a high-quality cold water salmonid system, with healthy and diverse macro-invertebrate populations and brook trout as the predominant predator species. KBNRD regularly stocks brook trout into the upper portions of this watershed. As the river nears Lake Superior the gradient slows and water temperature rises, leading to the presence of cooler water species and anadromedous species in the vicinity of Huron Bay. The lower portion of the Silver River also experiences some lamprey spawning activity.

Water quality is typically high in the Silver River East Branch, the Silver River, and associated tributaries. The USGS found some areas with relatively high copper, and mercury, and areas with slightly elevated nutrient levels, but overall considered the waters to be generally high quality. (Appendix P.)

The Falls River watershed is approximately 30,047 acres in size. The Falls River main branch originates approximately 5 miles from Lake Superior, at the confluence of Ogemaw and Burns Creek. Falls River tributaries include Denomie Creek, Robillard Creek, Ogemaw Creek, Burns Creek, and Taylor Creek. Portions of the lower Falls River flowage are residentially developed while much of the upper watershed is forested and used for commercial timber purposes. Industrial operations are also present in the lower Falls River watershed and include the L'Anse Warden Electric Company, LLC, (LWEC) a co-generation power plant that uses a mix of natural gas, used tires, wood scraps, and railroad ties as fuel for electricity generation. Also present in the lower Falls River watershed are a closed ash landfill, an industrial spray field, CertainTeed ceiling tile manufacturing plant, a golf course, and the fuel processing facility for the L'Anse Warden Electric Company.

In the spring of 2009 KBNRD staff responded to a reported fish kill in the lower Falls River. Upon inspection it was found that a number of adult white-suckers had died, and the cause was suspected as excessive high temperature water discharge from the LWEC power plant into the colder Falls River system causing thermal shock. Much of the upper portion of the Falls River watershed can be generally characterized as a high-quality cold water salmonid system, with healthy diverse macro-invertebrate populations and brook trout as the predominant predator species. Brown and rainbow trout are also present in this system. KBNRD regularly stocks brook trout at a number of locations in this watershed.

As the river nears Lake Superior a higher proportion of anadromedous species are found in the vicinity of Keweenaw Bay beneath the barrier falls for which the river is named. The lower portion up to the barrier falls is also an area used by sea-lamprey for spawning. Water quality is typically high quality in the upper portion of the Falls River and tributaries. The lower portion, towards the mouth, is likely impacted by non-point source impacts to some degree, and is impacted by discharge from the LWEC power plant.

The on-reservation portion of the Sturgeon River watershed includes approximately 19,370 acres of the 467,524 acre Sturgeon River watershed. The Sturgeon River begins in the eastern portion of Baraga County and winds south of the Reservation crossing through Ottawa National Forest where it turns west and then northwest passing through the northwest corner of the reservation. From here the river trends north, eventually discharging into Portage Lake, which is connected to Lake Superior. The Sturgeon is a very large complex watershed, much of which is forested, that alternates between wetland flats and meander behavior, to steep drops over bedrock. The system contains 42 separate tributaries. Portions of the upper main branch are cold enough to support healthy trout populations year round, however other portions warm up to levels that won't support trout during the summer months. The numerous tributaries provide refuge and spawning habitat for cold water trout species present in the system.

Smaller Lake Drainage watersheds cover approximately 34,600 total acres on the east side of Keweenaw Bay, and 37,999 total acres on the west side of Keweenaw Bay, which includes the Little Carp River watershed area. Predominant smaller watersheds within Lake Drainage on the east side of Keweenaw Bay include Zeba Creek and Linden Creek, both of which are predominantly cold water brook-trout systems.

Lower Zeba Creek is managed by KBNRD as a target location for reestablishment of coaster brook trout which are stocked annually. This system also experiences spawning runs from anadromous species such as steelhead.

Upper portions of Linden Creek have high quality cold-water habitat and healthy brook trout populations while much of the lower portion of the system has been impacted by development. The L'Anse Wastewater Treatment Plant discharges into lower Linden Creek. Predominant Lake Drainage on the west side of Keweenaw Bay includes Little Carp River has areas of high quality cold water habitat with brook trout present. Portions of the little Carp River system are impacted by beaver dams.

Kelsey Creek can be generally characterized as a high-quality cold water salmonid system, with healthy diverse macro-invertebrate populations and brook trout as the predominant predator species. Kelsey Creek is managed by KBNRD as a target for reestablishment of coaster brook trout which are stocked annually. Lake drainage areas also include numerous smaller unnamed creeks. This includes unnamed tributaries to larger systems and short-run creeks draining directly to Lake Superior. Many of these smaller systems have low dissolved

solids concentrations, typically high quality water, and provide coldwater aquatic species habitat.

Surface Water Bodies

Surface water bodies include approximately 160 small lakes and ponds within the Reservation boundaries, most of which are not named. Total acreage of surface water bodies on the Reservation is approximately 259 acres. Some of the larger named surface water bodies include:

Lake or Pond	Acreage
Third Lake	53.9
Bishop Lake	9.2
Laughs Lake	15.2
Hidden Lake	4.8
Lighthouse Pond	1.9
Mud Lakes	9.3
Pinery Lakes	25.7

Third Lake is most productive warm water fishery within the boundaries of the Reservation. The lake is 20-25 feet at maximum depth. The primary fishery consists of largemouth bass bluegill, yellow perch, and pumpkinseed sunfish. Surveys conducted by the KBNRD have found robust populations of these species. Other fish species documented within Third lake include rock bass, fathead minnow, common shiner, and various minnow species. Third Lake drains through an unnamed tributary into the Silver River.

Bishop Lake is approximately 15 feet at maximum depth. The lake is thought to be spring fed and seems to stratify in the summer, allowing for the existing brook trout population to survive winter ice-cover and summer high temperatures. In addition to brook trout, other species documented include yellow perch, pumpkinseed, sunfish, and minnow species. Discharge from the lake drains into Robillard Creek, which is a tributary of the Falls River.

Laughs Lake is currently about 6-8 feet average depth, with depths of more than 10 feet documented. An older impoundment on the lake outlet was partially breached several years ago, lowering the overall lake level by about 6-8 feet and severely eroding and damaging the outlet stream habitat. The lake discharge stream connects to Gomanche Creek, a tributary of the Silver River. This warm water fishery presently consists mainly of bluegill and pumpkinseed sunfish, along with some largemouth bass. Prior to partial breaching of the impoundment this was a popular location for tribal and non-tribal members to fish for bass and panfish. Laughs Lake contains small wild rice stands and is a target location for wild rice planting by KBNRD. Longer term goals for Laughs Lake are to restore the lake to previous levels and develop a semi-primitive camping area for KBIC member use.

Hidden Lake is part of and connected to a larger wetland and Sand Point Sloughs, mixed surface water wetland complex. (Appendix P.) The Sand Point Sloughs average 2-4 feet in depth, with Hidden Lake exceeding 8 feet in the middle. Fish species encountered in the past have included brown bullheads, northern pike, bluegill, pumpkinseed sunfish, central mudminnow, brook stickleback, Johnny darter, largemouth and smallmouth bass, rockbass, yellow perch, minnow species including creek chub, fathead minnows, and others. This system is subject to winter and summer fish kills, which were documented in 2001 and 2005. Tamarack leaf shed may be causing slight acidification of waters at certain times of the year. This area has existing wild rice beds which are harvested by KBIC members for personal use and managed by KBNRD. In the past the system was connected to Lake Superior, however in recent years the connection has been blocked by sand presumably resulting from longshore drift and Lake Superior's lowered water level. The hydrological connection with Lake Superior, when present, allows for mixing of waters in this system with those of Lake Superior. This connection may also allow for some degree of immigration and emigration of fish and other aquatic species.

The Lighthouse Pond is part of the larger Sand Point wetland complex and is located at the KBIC campground. (Appendix P.) The pond is used for the annual KBIC Kids' Fishing Derby. Each year the community honors a former commercial fishermen or family at the Kids' Derby to honor both the person, or family, and the fishing tradition of KBIC. Annual attendance is typically 300-400 people. The Kids' Fishing Derby memorializes a tribal fisherman or family each year to honor them during our event. KBIC along with donations from local businesses gives this event approximately \$20,000 each year. The tribe has added a fisherman memorial to the site. The pond has an average depth of about 5 feet, with a maximum depth of 9 feet in the mid-section. Fish species documented in this small pond include brown bullheads, northern pike, bluegill, pumpkinseed sunfish, central mudminnow, brook stickleback, Johnny darter, largemouth and smallmouth bass, rockbass, yellow perch, minnow species including creek chub, fathead minnows, and others. The pond is regularly stocked for the Kids' Fishing Derby. Artificial aeration was installed several years ago to help prevent oxygen depletion in the pond during winter ice-cover and summer heat.

Mud Lakes is also part of a mixed surface water wetland complex which receives drainage from upland areas to the west, and discharges to Lake Superior to the east. This system is not considered a productive fisheries system, although KBNRD has not conducted extensive fisheries related research work here. The area is managed by KBNRD for wildlife and waterfowl and has been a target for restoration of wild rice on the Reservation. The hydrology of this area is likely partly affected by US Highway US-41 (both old and new), the former railway bed along the eastern border of Mud Lakes, and an older water control structure. It appears as if this area has experienced historical dredging and filling. A small machinist-welding shop operation is present at the eastern edge of the Mud Lakes wetland complex.

Pinery Lakes may be in the process of evolving from a mixed lake and wetland ecosystem to a predominantly wetland system. Since 2002 surface water levels in Pinery Lakes have receded and the wetland area has expanded, possibly due to installation of drainage culverts in this area. The Pinery Lakes discharge through an unnamed tributary to Linden Creek. In the past, KBNRD has documented minnow species present in the system.

In addition to the above systems are numerous small unnamed water bodies and wetlands, covering a spectrum of habitat types, and providing a variety of ecosystem services for native plants, fish, and wildlife on the Reservation.

River and Stream Fragmentation

Some fragmentation of existing river and stream systems on the Reservation are present. A water control structure is present on the outlet of Mud Lakes to control wetland water levels. An older damaged impoundment is present on the outlet of Laughs Lake. When the Laughs Lake impoundment was breached it resulted in stream and habitat degradation through erosion and sedimentation for a distance downstream.

The majority of the fragmentation of Reservation rivers and streams is found at road crossings, where road culverts are acting as barriers to aquatic organism travel in the system. A survey of 92 major stream crossings for major roadways for watershed in and around the Reservation identified 25 culverts that were barriers to fish movement. (Appendix Q.) Barriers included perched, blocked or crushed culverts. Some flow barriers may also be present although further analysis is needed. Identified barriers were affecting 32 miles of perennial rivers and 19 miles of intermittent streams in and around the Reservation. KBIC is currently working to remove road crossing barriers and replace them with structures which restore stream and river connectivity.

Development in the area in and around the Village of Baraga has altered the local hydrodynamic regime through the filling of wetlands, and enclosure, rerouting, and filling of small streams. Detailed information is currently not available.

In addition to barriers noted above, there are numerous natural stream barriers including waterfalls, beaver dams, and small pond or wetland complexes which are common in parts of some watersheds on Reservation.

Water Quality Program Data and Reports

Since 2000, with assistance provided through CWA Section 106 funding, KBNRD has been sampling surface waters of the Reservation and ceded territories to establish baseline water quality and to monitor waters for changes in quality over time. Water quality sampling locations and data are provided in Appendix R. KBIC CWA 305(b) reports included in Appendix R describe the status of surface and groundwater on the Reservation.

KBIC, in cooperation with the USGS, maintains three stream gauging stations in the Silver River watershed. Stream gauge data and information is also provided in Appendix R.

Additional water resource characterizations have been completed for various purposes. These characterizations are also included in Appendix R.

Resource Use and the Significance of Water and Water Quality

Resources and Resource Use

The existing water resources of the Reservation have provided subsistence, cultural, and spiritual benefits to many generations of KBIC Ojibwa. Tribal members use and depend upon quality water for a variety of purposes including fishing, trapping, swimming, boating, gathering, drinking and residential use, and for spiritual and cultural purposes as they have since ancient times. The relationship between tribal members and the land and water resources and area ecosystems is part of the KBIC identity. The health of the water is directly related to the health of KBIC.

The symbol for the KBIC, found on the cover of this application, is an eagle in flight. Eagles have a great deal of significance for tribal members. Feathers and parts of eagles have been used for traditional purposes since ancient times. The area of the L'Anse Reservation is home to many resident eagles and eagles are a common sight as they fish, hunt, and forage through the area. Quality water is essential to maintaining healthy ecosystems that support healthy forage systems and wildlife which in turn support a healthy naturally reproducing native eagle population present in the area of the Reservation. KBIC was reminded recently of the threat of contaminants to native eagles. In 2009 someone laced a deer carcass with poison on the Reservation. Two eagles found dead close by were determined to have died after feeding on the poisoned deer carcass.

Harvest or harvest related activities occur throughout the year for KBIC members. In the winter two of the main harvest activities include ice-fishing and trapping. Spring is a time of renewal for much of the area, and activities such as maple syrup collection are common. Following the breakup of ice on the waterways and lakes is a time for spring spearing of fish, a time during which KBIC members spend time with family and friends while harvesting fish much as their ancestors did in previous generations.

Although not native to the area, some of the anadromous fish species such as steelhead and salmon are now regularly harvested by tribal members as they migrate from Lake Superior up rivers to spawn in the spring time.

Spring is also a time for planting and gardening activities to start. Throughout the summer and into the fall, KBIC members gather berries as they come into season including blueberries, blackberries, cranberries, raspberries, strawberries, apples, plums, wild rice and other foods. Late summer and into the fall is a time for harvesting personal garden crops

and orchard grown fruits. Early fall is the time for wild rice harvest, either from local water bodies or from off Reservation locations. Fall is also a time for hunting many wildlife species, such as grouse, waterfowl, and deer.

All of these harvest resources and the way of life upon which KBIC tribal members rely, and have relied upon since ancient times, depend upon high quality ecosystems. High quality ecosystems and healthy plant and wildlife communities are critically dependent upon high-quality water and it is critical that KBIC have the authority to set water quality standards that are relevant and specific to KBIC membership needs.

KBIC has a long tradition of resource harvest and consumption from both Lake Superior and inland areas and many fish and wildlife species are harvested by tribal members for subsistence purposes. KBIC has inherent and reserved rights to hunt, fish, harvest and manage natural resources on-reservation and in the ceded territories which the membership actively exercises. The Licensing Department reports an annual average of 630 individual hunting, fishing, trapping, and gathering licenses purchased between 2006 and 2010.

Due to the significance of waterfowl to KBIC and the fact that the area in and around Keweenaw Bay is a significant waterfowl stopover point during the fall migration, KBNRD conducts annual fall waterfowl surveys at index stations around the Reservation. In addition to monitoring, wetland and waterfowl habitat and forage restoration projects are completed by KBNRD primarily with support from the BIA Circle of Flight program. (Appendix S.) Typical waterfowl species found on the Reservation at various times include American Coot, Canada Geese, Wood Duck, Common Loon, Buffle Head, Mallard, Black Duck, Greater/Lesser Scaup, Blue and Green Wing Teal, Common, Red Breasted, and Hooded Merganser, American Wigeon, Cormorant, Goldeneye, Ringneck, Trumpeter Swan, and Redheads.

Riparian areas bordering streams and rivers, and wetland areas are important habitat for wildlife on the reservation. The Michigan DNR estimates that nearly three-quarters of the original wetland area in Michigan, estimated at over 11 million acres, had been destroyed by the middle part of the 20th century. All wildlife on the Reservation use streams, rivers, and wetland areas to meet shelter, food, and travel needs and KBIC has an interest in protection and preservation of wetland resources on the Reservation. Wildlife corridors identified through baseline wildlife data collection studies by KBNRD follow Reservation river and stream corridors, and wetland areas. (Appendix S.) The Reservation is an area rich in species due to quality habitat and ecosystems. (Appendix S.) Species notes as present during recently completed inventory work include wolf, coyote, red fox, gray fox, bobcat, otter, skunk, fisher, marten, mink, weasel, badger, beaver, muskrat, porcupine, red squirrel, chipmunk, flying squirrel, snowshoe hare, raccoon, white tailed deer, moose, and bear, along with 136 species of birds. Trapper and Hunter surveys conducted by KBNRD identify regular harvests of deer, bear, ruffed grouse, rabbits, squirrels, turkeys, ducks, geese, woodcock, geese, beaver, raccoon, coyote, pine marten, and skunk. Deer in

particular, which are a dietary staple for many tribal members and is served at gatherings such as Pow-wow and the annual Fall Harvest Feast, depend upon these water based systems throughout their life. KBNRD's spring frog-and-toad surveys have regularly documented that all frogs and toads native to the Upper Peninsula are present on the Reservation. Wetland investigations also find numerous species of turtles and salamanders present. Amphibians in particular are susceptible to pollution and the presence of healthy populations of these species is indicative of generally healthy and high quality waters. (However, see Section IV.D.) High quality waters are necessary to sustain quality habitat and healthy wildlife populations and it is critical KBIC have the authority to set water quality standards that are relevant and specific to KBIC membership needs.

Aquaculture

KBIC operates and maintains a tribal fish hatchery on the Reservation that uses groundwater for its fresh water supply. (Appendices T and JJ.) The hatchery was established in 1993 and currently rears native brook trout and lake trout for fishery restoration stocking. Lake trout are stocked into the Keweenaw Bay of Lake Superior while brook trout are stocked into streams and rivers on and near the Reservation. Since 1993 over 1.5 million lake trout and over 1 million brook trout have been reared in the hatchery facility and stocked into area waters. Stocking information is included in Appendices T and JJ. In addition to rearing for stocking, from 1995 to 2005, KBIC reared lake trout for the U.S. Fish and Wildlife Service's (USFWS) hatchery system. Various strains of wild lake trout were held within the KBIC isolation hatchery building for 2-year periods to ensure the fish could be certified as disease free. Once certified as disease free, the lake trout were then transferred into the USFWS national fish hatchery program to be used as brood stock for the Great Lakes lake trout restoration program. KBIC was formally recognized by the USFWS in 2007 for this effort with a Partner in Conservation award. Lake trout and brook trout are important native fish species currently harvested by KBIC members as they have been for many generations.

In 2008, KBIC built and began operating a walleye rearing facility on the Reservation, located about 1.5 miles east of L'Anse in the Linden Creek watershed. (Appendices T and JJ.) The rearing ponds utilize Reservation surface water for walleye rearing operations. Walleye are an important subsistence harvest species for KBIC members and walleye harvests are shared with family, friends, and tribal elders. In the first three years of operation, KBIC has reared and stocked approximately 68,000 walleye into area waters.

The hatchery and walleye rearing facility employ tribal members and the fish released benefit both the tribal and non-tribal community. Since inception an estimated \$1.5 million dollars has been invested in these operations. The value of hatchery stock reared to six inches has been calculated by KBIC at about \$1 per fish. Annual stocking targets are currently 50,000 lake trout, 40,000 stream resident brook trout, and 6,000 coaster brook trout. Actual stock produced depends on many factors, but fluctuations aside and assuming stocking targets are met the value of stock produced and stocked is approximately \$96,000

per year. Stocking of lake trout helps support the KBIC commercial lake trout fishery in Lake Superior, which provides a revenue source for the 15-20 fishers per year who are licensed by KBIC. Fish harvest varies from year to year. In 2010, KBIC commercial fishers harvested a total of 116,875 combined species pounds. Value is slightly variable at any given time, but assuming that the average price varied from between \$0.50 and \$1.50 per pound, the value of this harvest in 2010 would be between \$54,437 and \$175,312. Stocking also helps support KBIC member subsistence harvest in Lake Superior and provides support for area tourism and associated businesses. Tribal members use subsistence harvest to provide fish for their families, elders, and for community feasts and events, such as the annual Pow-wow. The ability to raise fish is dependent upon maintenance of high quality water supplies and protection of surface water quality is critical to maintaining a quality groundwater supply. Brook trout in particular prefer clear cold waters of high purity and a narrow pH range in lakes, rivers, and streams. Brook trout are sensitive to poor oxygenation, pollution, and changes in pH caused by environmental effects such as acid rain or acid mine drainage. The diverse diet of brook trout includes crustaceans, frogs and other amphibians, insects, mollusks, smaller fish, and invertebrates, which also require high quality water to thrive. The ability to maintain healthy native fish populations on the Reservation and maintain quality productive aquaculture operations is critically dependent upon protection of existing water quality.

Native Plants Greenhouse and Native Plants

KBIC operates and maintains a native plant greenhouse on the Reservation that uses groundwater as a water supply. (Appendix U.) The greenhouse, established in 2010, is used to propagate native plant species for use in restoration project work on the Reservation. This facility is part of a larger KBNRD program to identify invasive plant species populations, implement invasive species control programs, and restore native plant species to impacted areas. To date approximately 38 separate native plant species have been raised and planted at several Reservation locations. The greenhouse provides employment for tribal members and the species planted provide for both direct and indirect benefits to tribal members and wildlife, including pollinator populations, some of which are currently at risk. To date, approximately \$60,000 has been invested in establishing the native plants greenhouse infrastructure. The ability to propagate and restore native plants is dependent upon quality water and the protection of water quality is critical to the future of the native plants greenhouse operations.

According to traditional teachings, every tree, bush, and plant has a use and KBIC members have long used native plants for a variety of purposes. The Reservation is an area still rich in plant species diversity. (Appendix U.) Plants were and are used for an assortment of purposes, including food, clothing and fiber, medicines, dyes, charms, toys, and in religious ceremonies.

Many native plants are collected for consumption, or in the case of maple trees are utilized for food production. Native berries collected for consumption include blueberries,

blackberries, cranberries, raspberries, strawberries, cherries, wintergreen, bearberries, and others.

Practitioners of traditional medicine are currently active on the Reservation and KBIC Government provides for traditional healing services. The traditional clinic practitioner regularly uses native plants to assist members in dealing with health related issues. Many native plants are used for traditional ceremonies and other purposes by tribal members. Commonly recognized sacred plants include tobacco, sage, sweetgrass, and cedar.

A guide to native plant use of the Ojibwa was completed by the Great Lakes Indian Fish and Wildlife Commission in 1993 and identifies 384 species used by the Ojibwa. (Appendix U) Native plants, and some introduced species such as fruit trees, rely on high quality surface water and groundwater for growth and reproduction.

Wild rice (manoomin) is the “food that grows on water”, whose presence fulfilled the prophecies foretold in the Anishinaabe’s migration from the east. Over one thousand years ago, the Anishinaabe people lived along the Atlantic coastline of Turtle Island (North America). They were visited by eight Prophets and given seven Prophecies to follow, the third of which directed them to travel westward until they found the place where “food grows on water”. When they arrived in the Great Lakes region they discovered vast beds of wild rice, or Manoomin. Wild rice continues to be a traditional staple of the Ojibwa diet; used in our daily lives, ceremonies, and feasts. It has enormous cultural significance to tribal members. (See Appendix S.) Wild rice was historically present in the Western Upper Peninsula of Michigan. Most historic wild rice stands were lost during the 18th and 19th centuries primarily due to logging activities in the area which altered water levels and degraded habitat as logs were transported by water. In addition to direct harvest, wild rice provides forage for various species of wildlife and waterfowl, which KBIC members harvest. Because wild rice is part of the KBIC identity, KBNRD has been working to establish self-propagating stands of wild rice at a number of locations around the Reservation (see Appendix S). Since Program inception approximately 18,000 pounds of rice has been planted at 12 locations on the Reservation and a number of ceded territory locations by KBNRD. Wild rice is susceptible to impact from various types of water pollution and is also at-risk from infestations of invasive species. High levels of sulfate, often discharged from hard rock mining operations, can reduce or eliminate wild rice stands. Maintaining wild rice stands on the Reservation and establishing additional areas of wild rice, which is a priority for KBIC, is dependent upon maintenance of high quality water.

Native vegetation in general is highly susceptible to contaminant impacts. Plants uptake heavy metals from soils and areas with heavy metal contamination can cause higher metal loads in plants, or can eliminate vegetation production. Consumption of plants from areas with heavy metals in soils can be a health risk for both humans and wildlife. Areas such as open dumps and scrap yards on the Reservation are often times devoid of vegetation or only sparsely vegetated. One specific example of contaminant impact to plants, Sand Point, is further discussed below.

Forestry

KBIC's Forestry Department is driven by multiple objectives. Integrating the Tribe's cultural values into sustainable forestry practices are the overarching goals. The Forestry Department incorporates traditional gathering and cultural practices into silvicultural prescriptions while providing economic opportunities to tribal businesses and to the Tribe as a whole. The current Forest Management Plan is approved by the BIA office and Michigan's Best Management Practices are used as standards instead of guidelines. Forestry operations are bound to mitigate negative impact to the environment including the integrity of the soil, wildlife habitat and water resources. Income generated by timber harvests has averaged \$85,861 per year. Collaboration among natural resources and cultural departments are encouraged to consider all aspects of uses for forested ecosystems.

Groundwater

Groundwater is a significant source of drinking water on the reservation. Both tribal and non-tribal residences currently use groundwater as their primary residential supply. (Appendix V.) Information and data collected and compiled by the U.S. Geological Survey indicates that the principle drinking water supply aquifers, the Jacobsville Sandstone and the Michigamme Slate, are confined bedrock aquifers which are hydraulically connected throughout most of the Reservation. (See Appendix R) Degradation or contamination of these primary supply aquifers would devastate the community both socially and economically and create severe hardship in the area. Isolated areas with smaller alluvial or glacial aquifers are also used by some residents for water supply. Groundwater quality is generally acceptable for residential use, although some areas of groundwater contain higher than desirable levels of iron or manganese and require treatment by residents prior to use.

Groundwater discharge into streams, rivers, ponds, and wetlands on the reservation provides critical ecological service such as maintenance of base flows in times when direct surface input is lower during late summer and part of the winter. During hot dry summer months groundwater input into streams and rivers may be critical for survival of many coldwater fish species and other aquatic organisms that are intolerant of warmer water temperatures. Cold groundwater input into streams and rivers also plays a role in the success of brook trout spawning activity as brook trout are found to strongly prefer spawning at a location with a groundwater upwelling, which provides a source of clean well oxygenated water for brook trout through the egg and larval stage.

The nexus between surface water and groundwater makes it critical for KBIC to be able to protect surface water quality on the reservation, which in turn protects groundwater quality.

Sweat Lodges and Saunas

Sweat Lodges and saunas are used by tribal members for both traditional and recreational purposes. KBIC's New Day Treatment facility recently completed construction of a sweat lodge for staff and patient use. Water used in lodges on the Reservation is either supplied by groundwater or surface water. Contaminated water poses a risk to human health if used in sweat lodges or saunas. A public health assessment completed by the Agency for Toxic Substances and Disease Registry for the Midnite Mine Site, in Wellpinit, Washington (July 20, 2009) found that "exposure to site contaminants.....is a public health hazard for individuals who visit the mining affected area for traditional and subsistence activities" and "[S]pecific activities associated with these exposures are as follows:.....breathing water vapor generated by heating water from drainages and seeps during sweat lodge ceremonies."

Documentation on the Importance of Water

During the development process for completion of KBIC's IRMP, a 20-question survey was distributed to over 1,800 adult KBIC tribal members residing on and off Reservation. (Appendix K.)

Completed surveys were received from 786 individuals. In their responses to the survey, KBIC tribal members expressed that protection of water quality should be the top priority of KBIC. The goal statement for the Water Quality section of the IRMP is "Ensure that all Reservation surface waters are fishable, swimmable, and drinkable in accordance with the EPA Clean Water Act, and Tribal water quality standards; and protect the quality of groundwater resources for tribal members."

In 2004, KBIC developed a Strategic Plan using surveys, conducting public meetings, holding government planning and listening sessions, and using input from KBIC members, department heads, government staff, and elected officials. (Appendix L.) The Strategic Plan adopted by the Tribal Council on October 20, 2005, serves as a guidance document for Government planning and operations to better serve the tribal membership. Within the Environment section, the water related vision for the KBIC membership is that "[t]he waters of Lake Superior, inland lakes, and streams are the cleanest in the world." (Appendix L.) The Strategic Plan also includes a goal statement relevant to this TAS application which is, "...to provide for the protection, preservation, mitigation and enhancement of the natural resources and environment of the KBIC..." and an objective of "...utilizing Tribal authority to establish a Clean Water Act within the Reservation and ceded territory..." demonstrating the importance of clean water to the tribe.

In 2007, the Tribal Response Program (Brownfield Program) collected information from the tribal membership to help establish Brownfield Program priorities. Throughout the survey the KBIC membership consistently identified protection of drinking water, water quality,

and natural resources as priorities for the Brownfield Program, for Brownfield site cleanup, and for site redevelopment.

In the fall of 2004, KBIC members were surveyed regarding the importance of water and how they use water. Some tribal members chose to send letters regarding this issue. The responses to the survey provide additional indication of the importance to KBIC membership of protecting and preserving water quality and resources for the tribe. (Appendix W) When asked what water meant to them, numerous respondents indicated quite simply that water meant life.

In November 2004, over 100 American Indian tribes and Canadian First Nations met at Sault Ste. Marie, Michigan, to discuss ways to cooperate in the preservation of the Great Lakes. Practically every tribe and nation that sent representatives agreed to an accord promising to cooperate with each other in protection of the waters of the Great Lakes Basin. KBIC representatives were in attendance and are signatory to the Accord. (Appendix W.) Fittingly, the Accord was signed while women, who are caretakers of the water, sang. The significance of water is stated quite clearly in this Accord through the following passages:

Traditional teachings and modern science combine to strengthen our historical understanding that Water is the life-blood of our Mother Earth. Indigenous women continue their role as protectors of the Water. Ceremonial teachings are reminders of our heritage, they are practices of our current peoples, and they are treasured gifts that we hand to our children.

When considering matters of great importance we are taught to think beyond the current generation. We also are taught that each of us is someones' seventh generation. We must continually ask ourselves what we are leaving for a future seventh generation.

We understand that the whole earth is an interconnected ecosystem. The health of any one part affects the health and well being of the whole. It is our spiritual and cultural responsibility to protect our local lands and Waters in order to protect the whole of Mother Earth. (Appendix W.)

KBIC is a signatory to the Intergovernmental Accord between Michigan Indian Tribes and the State of Michigan that discusses how critical water resources and protection of these resources is for the health and welfare of both the Tribes and the State of Michigan. (Appendix W.)

In 2004, KBIC Tribal Council unanimously approved Resolution KB-1301-2004 prohibiting Kennecott mining activities within the boundaries of the Reservation for reasons including Kennecott has shown no satisfactory evidence that it can undertake this activity without polluting ground or surface water and Kennecott has not made a showing that, after it undertakes such activities, it can protect the ground and surface waters from acid drainage. (Appendix W)

On June 28, 2004, the Tribal Council passed Resolution KB-1296-2004 supporting the permanent establishment of Lake Superior Day as the third Sunday in July for the Keweenaw Bay Indian Community. (Appendix W.) Over the years this event has grown to include a Water Ceremony and prayer to begin the day's events, a beach cleanup of the entire reservation, and a luncheon put on by KBIC for all of the volunteers. The primary importance of water to KBIC is stated quite succinctly and clearly within this Resolution which states, "...water is life, and the quality of water determines the quality of life."

In the summer of 2010, KBIC and the U.S. EPA completed and approved an Environmental Program and Implementation Agreement covering the 2010-2012 time period. KBIC listed 17 Environmental Program Priorities in this Agreement, all of which include protection and preservation of natural resources and water quality in some form, either directly or indirectly. A copy of the Agreement is attached in Appendix W.

On October 29, 2009, Susan LaFernier, then KBIC Council Vice-President, addressed the Interagency Ocean Policy Task Force, at their Great Lakes Regional Public Meeting, in Cleveland, Ohio. In her address Ms. LaFernier discusses the importance of water and the environment to KBIC, and states "The Lake Superior ecosystem and the health of these systems are critical to the health of our Community." She goes on to discuss a significant potential threat to the water, that of mining of metallic sulfide minerals in the Upper Peninsula. A full transcript of her statement is attached. (Appendix W.)

OTHER STATEMENTS PENDING

The Creation Story

Most notably, water is a primary element in the creation story of the Anishinabe people which describes the creation, out of nothing, of rock, water, fire, and wind. Into each one was breathed the breath of life and each was bestowed a different essence and nature. Each substance had its own power which became its soul-spirit. Waters were given powers of purity and renewal. Water, or nibi, is the life blood of existence. Ceremonies are conducted to give thanks to the water. The protection of life of the water is the essence of survival for KBIC, both physically and spiritually. As noted by tribal member Debra Williamson, "...water is the life blood of our Mother Earth...Mother Earth gives us our medicine, her strength. If she is sick or weak, we will become sick and weak people." (Appendix W.)

The discussion and materials provided in this section provide clear and consistent documentation that the significance of water to KBIC is profound, as it has been since ancient times, and that water quality, and preservation of water quality is a priority for KBIC.

Because of the critical importance of water quality to KBIC, the mobile nature of pollutants, the interrelationship between groundwater and surface water, and the interconnected nature of water resources on the Reservation, it is not possible to separate the effects of water quality

impairments on non-Indian owned fee lands from those on tribal properties. For this reason it is essential that KBIC have the authority to set water quality standards for the entire reservation that are specific to Community needs.

D. Current Water Quality Impairments and Threats

Baraga County is in general sparsely populated with a listed population of 8,860 in 2010 within the 898 square mile County area. As of 2013, KBIC member enrollment was 3,547 with 932 residing on the L'Anse Reservation. County Census data and land use information is provided in Appendix X. Communities within the watersheds include the small community of Zeba, the Village of Baraga and part of L'Anse Village. Outside of the three main communities, housing and development density is low, with a mix of full time and part time residences and camps. Although sparsely populated, real and significant threats to Reservation water quality are present which threaten the political integrity, economic security, and health and welfare of KBIC. Information demonstrating threats is provided below.

Threats to the reservation waters are separated for presentation purposes into the following categories:

- 1) Agriculture;
- 2) Private commercial forestry;
- 3) Residential development and septic systems;
- 4) Illegal dumping of solid waste and household hazardous waste;
- 5) Current and former industrial/commercial facilities on the Reservation, including junkyards and underground storage tank sites;
- 6) Improper disposal of industrial/commercial waste, including dumping of 55-gallon drums in non-residential areas;
- 7) Transportation threats and impacts;
- 8) Other threats and impacts;
- 9) Air deposition of contaminants such as mercury and other heavy metals from both off-Reservation and on-Reservation sources;
- 10) Legacy mining impact, sand and gravel mining, and potential metallic sulfide mining.

1) Agriculture

Historically the percentage of land on the Reservation used for agriculture activities was higher than it is today although areas suitable for farming are still present. (Appendix Y) For example, the lands in and around the grounds of the current KBIC Tribal Center and Baraga Casino used to be farmland but currently consist of a mix of commercial, government, residential and idle land. However, agriculture operations still present threats to Reservation water quality.

One agricultural facility in the headwaters area of Little Carp Creek was likely contributing to high bacteria levels measured downstream from the property by KBNRD in 2005-2006. The facility raises livestock and may contain up to one-hundred stock at times. Exact stock numbers are not known. Since that time period manure lagoons and a runoff control structure were installed for the facility. (USDA pers. Communication) High bacteria levels in Little Carp Creek downstream from this property have not been detected since improvements were made. KBNRD continues to monitor Little Carp Creek.

Some smaller family farms are located on the eastern portions of the reservation in the Falls River and Linden Creek watersheds. Exact stock numbers are not known but visual evidence suggests that some of these farms might raise around 10-12 head of cattle in any given year, while other areas appear to primarily be used to produce hay. One small cattle raising operation at the site of the KBIC walleye rearing facility allowed cattle to have access to a small spring fed tributary to Linden Creek. Access of cattle resulted in erosion of this tributary drainage through trampling of the drainage way and banks. Animal waste was present in the small stream and wetlands on the property. Erosion and runoff can degrade water quality, as animal waste and sediment washes into the stream and downstream. KBIC working with the USDA built a fence to keep the cattle from direct contact with the tributary that leads to Linden Creek.

Improper agricultural practices such as over fertilization can result in changes in the stream water quality and stream species assemblage as addition of nutrients become excessive, leading to algal blooms, low dissolved oxygen and negative impacts to organisms. Improper pesticide or herbicide use by agriculture operations can also lead to water quality degradation. Some of these compounds are human carcinogens. Sewage treatment plant solids spreading has also occurred on some agriculture land on the reservation. Sewage solids contain nutrients and may also contain heavy metals. Leaching of either excess nutrients or heavy metals to surface water can cause quality impairments. Bacteria in drinking water can lead to serious gastrointestinal and other problems if ingested.

2) Private Commercial Forestry

Approximately 33% of the land within the Reservation boundaries is owned by three commercial timber companies: Plum Creek, Heartwood Forest, and GMO. (See Section IV.A.) Although the state of Michigan has forestry Best Management Practice (BMP) guidelines, timber cutting permits are not required for harvesting, following BMP is voluntary, and KBIC

currently has no oversight authority over private commercial timber operations on the Reservation.

Cutting trees on steep slopes or along shorelines can and does lead to increased erosion and sedimentation due to soil disturbance from heavy equipment, and a reduction in vegetation and loss of root systems which serve to slow direct surface runoff, uptake some of the water, and hold soil together. Heavy cutting within the Silver River watershed is considered a potential factor in what appears to be an increased intensity in spring runoff. Reductions in forest cover may generally result in quicker and earlier snowmelt events as solar radiation is able to penetrate to the snow cover more easily in the spring leading to earlier and more intense spring runoff events. With less vegetation to hold snow or melt water in the spring, erosion can increase leading to increased sedimentation into area streams and rivers. Concentrating spring runoff over shorter time periods causes runoff events with higher energy intensity, leading to increased bank erosion downstream.

Forestry roads are another potential cause of water impairment due to increased sediment input into area streams. Poorly installed culverts or poorly constructed stream crossings result in increased erosion and sediment input into area streams, leading to loss of spawning habitat and general degradation of fish habitat. One forest operations access road on private commercial timber property that crosses Dakota Creek on the east side of the Reservation runs through the bed of the creek. There is no bridge at this location resulting in ongoing erosion and sediment input into the stream as logging trucks and other vehicles cross back and forth through the creek. Additional forest road water quality impact and impairment is caused by construction of new roads, upgrading existing roads, or road maintenance. Road construction activity often results in dredging and filling of wetlands, which result in loss of ecosystem services these wetlands provide, alteration of hydrodynamic regimes, and degradation of water quality. Commercial forestry impacts to water quality resulting in sediment input into water bodies are identified in KBIC CWA 305(b) reports.

Another threat to Reservation water quality from forestry operations is caused by use of chemicals such as herbicides and pesticides. Appendix Y contains spray information and Material Safety Data Sheets (MSDS) for herbicide chemicals applied by Plum Creek on the Reservation. The herbicides used can be toxic to both human health and aquatic life as noted in the material provided in Appendix Y, and spraying of these compounds on the Reservation is a direct release to the environment. KBIC currently has no oversight authority of commercial silviculture operation on Reservation.

The release of sediment, nutrients, herbicides and pesticides from private forest land management activities has degraded water quality on Reservation and presents a potential future threat.

3) Residential Development and Septic Systems

Many residences on the reservation are not serviced by municipal wastewater collection and treatment systems but use septic systems instead. The exact number of septic systems on the Reservation is unknown. According to the Western Upper Peninsula Health Department (WUPHD), which serves a 5-County region that includes Baraga County, from 2002-2010, 682 septic permits were approved for Baraga County (WUPHD Personal Communication, 2011). Indian Health Service (IHS) estimates the number of septic systems serving tribal members is approximately 140. (IHS Personal Communications, 2011) A KBIC and IHS cooperative inventory of tribal member systems is scheduled to begin in 2012 to collect septic system data and information including location, age, and current condition, and will be used to identify problems that need to be addressed. This inventory will not include non-tribal member owned systems.

In 2006, a new wastewater line was completed on the Reservation along a portion of Pequaming Road on the eastern shore of Keweenaw Bay to eliminate problems with ageing septic systems and failing drain fields which resulted in release of bacteria and nutrients into Lake Superior.

The potential impact of improperly maintained or failing septic systems, or improper disposal of septic waste, include leaching of nutrients and bacteria into reservation surface waters, leading to increased eutrophication and lowering of oxygen levels in surface water bodies damaging the functions of ecosystems upon which tribal members depend. Leaching of nutrients and bacteria into groundwater can contaminate drinking water supplies which can cause human health related problems. Bacterial loadings can cause disease and infections in both area wildlife and people through ingestion or direct contact. Septic system maintenance and waste disposal is also a threat to the Reservation's water quality. In 2007, a private septic waste hauler was discovered dumping septic waste on the Reservation. (Appendix Z) The hauler's activities were reported to the State of Michigan and resulted in license suspension. Nutrient loading impacts to water quality are identified in KBIC CWA 305(b) reports. Unmaintained septic systems on the Reservation present a substantial and direct threat to water quality and the resources of KBIC.

In addition to impact from septic systems, residential development can result in erosion and sediment input into area streams during construction and occupation, and result in non-point source contaminant loading of surface waters through the use of various lawn chemicals, runoff from paved surfaces, storm water runoff from developed areas, and other causes.

4) Illegal Dumping of Solid Waste and Household Hazardous Waste

Improper solid and household hazardous waste disposal on the Reservation is a significant threat to water resource quality. There are no convenient local solid waste disposal facilities available in Baraga County for our residents. The lack of convenient local solid and hazardous waste disposal options is considered one reason that illegal dumping of waste occurs on the Reservation. Solid waste is currently managed through an uncoordinated system of limited curbside pickup, individual private waste haul contracts, and individual drop off. KBIC has been

conducting curbside Spring Cleanup events for bulky household waste for many years, however these events are for the tribal membership only and do not provide service for non-tribal members residing within the Reservation boundaries. The nearest solid waste transfer station is in Houghton, Michigan, approximately 30 miles north of Baraga. The nearest landfill is in Greenland, Michigan, also approximately 30 miles from Baraga. KBIC is currently constructing an on-Reservation transfer station with recycling, which will provide a more convenient disposal alternative for local residents. Currently, the nearest household hazardous waste drop off is near Marquette, Michigan, approximately 60 miles east of Baraga. However, the KBNRD has been developing a Sustainable Hazardous Waste Collection Program since 2010, including hosting collection events for household hazardous waste and electronics twice a year for Baraga County residents and milk-run collection events for county establishments twice a year. Also, KBNRD is currently constructing a permanent household hazardous waste facility.

KBIC has been locating and cleaning up illegal dumps on the Reservation for many years. Typical dumps consist of small to medium sized piles of household waste and construction debris dumped in woodland areas. Typical materials found in illegal dumps include household hazardous wastes, solvents, paint thinners, spray cans, automotive fluids and fluid containers especially used oil and coolants, abandoned automobiles, lawnmowers, mattresses, tires, car batteries and other types of batteries, white goods, television sets, and electronic devices. Discarded household burn barrels and burn barrel ashes are also commonly found. In 2006, KBIC collected 242 tons of solid waste from seven illegal dumping locations on the Reservation and hauled it to the Houghton transfer station for disposal. (Appendix AA) KBNRD has located 32 additional open dumping locations within the reservation boundaries. (Appendix AA) KBNRD plans to conduct a cleanup of open dump sites in 2013 in coordination with the Indian Health Service (IHS).

Illegal dumping results in release of contaminants to the environment which threatens Reservation water quality. Burn barrel ash can contain high concentrations of heavy metals. Burn barrels are also known to result in release of dioxins into the environment. Household solid and hazardous wastes contain a variety of contaminants, including, but not limited to various semi-volatile organics, volatile organics, and heavy metals. Soil quality sampling conducted by KBNRD at illegal dump locations has documented soil containing concentrations of heavy metals above Michigan DEQ soil quality thresholds for residential direct contact and also documented lower level concentrations of volatile and semi-volatile organic compounds in samples collected and analyzed. Solids present at these locations may be visibly stained and often time's vegetation is either only sparsely developed or absent around some of these locations which may be indicative of vegetative stress from contaminants.

5) Current and Former Industrial/Commercial Facilities on the Reservation, including Scrap/Junk yards and Underground Storage Tank Sites

Scrap/Junk yards

Unlicensed and licensed scrap yards or junk yards are found on the Reservation. Lands upon which these types of sites are located are owned by both tribal and non-tribal members.

One scrap yard business on the Reservation, located on private land and owned by a non-tribal member, was visited several years ago by two employees of KBNRD. They found the scrap yard to contain refrigerators, automobile gasoline tanks, numerous fluid containers including 55-gallon drums, 20-300 gallon oil storage containers, 5-gallon containers, automobile radiators, junk automobiles, electronic devices, air conditioners, tires, and vehicle batteries. (Appendix BB)

Another junkyard on private land on the eastern portion of the Reservation, accessed from Usimaki Road, was found to contain junk cars, buses, construction equipment, automobile and other vehicle parts, household goods and furniture, white goods, construction debris, electronic equipment, shingles, wall board, oil filters, transmission fluid containers, spray cans, car batteries, automobile gas tanks, various small pumps and motors, large fuel oil storage tanks, domestic fuel oil tanks, paint cans, wood treating containers, burn barrels, a number of 55-gallon drums, 5-gallon buckets, and other materials. (Appendix BB)

Contaminants released to the environment from these types of properties have been documented as impacting site soils. Soil quality sampling conducted by KBNRD at a location of this type has documented soil containing concentrations of heavy metals above MDEQ soil quality thresholds for residential direct contact, including arsenic and lead, and also documented lower level concentrations of volatile and semi-volatile organic compounds in samples collected and analyzed. Arsenic is a carcinogen and lead is a suspected carcinogen as well. Human health effects from arsenic include decreased red and white blood cell production, blood vessel damage, and others. Human health effects from lead can include damage to every organ in the body. In addition to human health impacts, heavy metals can negatively impact native plant populations and wildlife, causing direct mortality or altering and diminishing reproductive or behavior necessary for survival. Clearly scrap yards and junk yard areas on the Reservation present a direct threat to Reservation water quality and the health and welfare of KBIC.

Underground Storage Tanks (UST's)

Currently, four gas stations are in operation on the Reservation with a total of fifteen active USTs. Of these active stations, two are owned by non-tribal members, one in Baraga and one in L'Anse. Three of these stations are also locations of open leaking UST (or LUST) sites. In total, there are nine LUST sites on the Reservation, five of which are open and four closed. Two of these are not identified in the State of Michigan records. Additionally, there are a total of fourteen closed UST sites, presumably with no environmental concerns identified. Two of these are not included in the State of Michigan database records. In addition, six locations have been identified at which KBIC suspects UST's were formerly used and may still be present. Many of these properties are owned by non-tribal members. Contaminants released to the environment from leaking underground storage tank sites and petroleum spills can degrade

water quality and threaten human and environmental health. Benzene is a known carcinogen and is highly toxic to both humans and wildlife. Benzene exposure can cause bone marrow abnormalities, anemia, leukemia, and many other human health problems. Naphthalene is also a suspected carcinogen and exposure can have many similar effects as benzene. Toluene, although less toxic than benzene, has health effects that include tiredness, confusion, weakness, drunken-type actions, memory loss, nausea, loss of appetite, and hearing and color vision loss. Short term ethylbenzene exposure can result in respiratory effects, such as throat irritation and chest constriction, irritation of the eyes, and neurological effects such as dizziness. Animal studies have reported effects on the blood, liver, and kidneys from chronic exposure to ethylbenzene. Petroleum product releases can contaminate soil, groundwater, and area surface waters and are a threat to area surface and ground water quality and thus, the health and welfare of KBIC membership.

EPA Regulated Facilities Data

According to the EPA Envirofacts Multi-system there are 86 EPA regulated facilities in Baraga County. A number of these are located on the Reservation. Using the EPA Envirofacts database information, facilities in Baraga County can be characterized as follows:

- 1) 8 facilities that produce and release air pollutants.
- 2) 2 facilities that have reported toxic releases.
- 3) 49 facilities that have reported hazardous waste activities.
- 4) 5 facilities with issued permits to discharge to waters of the United States (None of which discharge on the reservation but one of which does discharge into Linden Creek).

The comprehensiveness and accuracy of the EPA Envirofacts database has not been verified by KBIC staff, however, the use and management of hazardous wastes and the release of air pollutants on the Reservation are threats to Reservation water quality.

Michigan Part 201 Sites

Michigan Part 201 facilities listing database identifies 2-facilities located within the boundaries of the Reservation; Pettibone Plating Facility and Ken's Service in Baraga. (Appendix EE) A Michigan Part 201 list "facility" as defined by Michigan Part 201 of the Michigan Natural Resource and Environmental Protection Act (NREPA), is a location where there has been a release of a hazardous substance(s) in excess of the Part 201 residential criteria, and or where corrective actions have not been completed under Part 201 to meet the applicable cleanup criteria for unrestricted residential use. The Part 201 list does not include all of the sites of contamination that DEQ considers as subject to regulation under Part 201 because owners are not required to inform the MDEQ about the sites and can pursue cleanup independently. Sites of environmental contamination that are not known to MDEQ are not on the list, nor are sites with releases that resulted in low environmental impact.

Information summaries for two locations on the Reservation that Michigan has listed as Part 201 Sites and one location that was previously listed by Michigan as a Part 201 site are provided below. Information is also provided in Appendix EE.

1. Pettibone Plating Facility – The former Pettibone Plating Facility, also known as the Pettibone Cylinder Shop, is located just outside the Village of Baraga approximately 0.4 miles from Keweenaw Bay. The facility operated at the site from the 1960's until 2009 and manufactured and serviced hydraulic cylinders for the Pettibone main assembly plant also located in Baraga. The former manufacturing process involved chrome plating. Chrome plating process waters were stored in an aboveground, open-topped evaporator tank. According to MDEQ records, two releases of liquid containing hexavalent chromium (Cr VI) and trivalent chromium (CrIII) occurred in 1989 when the evaporator tank overflowed. The release investigation included soil, surface, and groundwater sampling which confirmed the presence of Cr III and Cr VI in concentration above MDEQ Part 201 generic cleanup criteria. In 1991, the release site was capped. The draining swale located on the property drains into Tangen Creek and eventually into Keweenaw Bay of Lake Superior, just west of Buck's Marina and Sand Point. According to work completed in 2004, UP Engineers and Architects Surface Water, and Sediment Investigation and Fish Studies for Sand Point Brownfield Grant, found chromium was present in Lake Superior sediment samples taken within Buck's Marina. Concentrations exceeded the DEQ soil cleanup criterion for chromium VI in two samples. According to the Michigan Part 201 database, evaluation is in progress and the site has not been provided clean closure. Hexavalent chromium is a human carcinogen and chronic human exposure to high levels of chromium VI inhalation or oral exposure may produce effects on the liver, kidney, gastrointestinal and immune systems, and possibly the blood. Trivalent chromium, although less toxic than hexavalent chromium, is still toxic at moderate levels.

2. Ken's Service – Ken's Service is an active automotive repair and service station located within the Village of Baraga, approximately 900 feet from Keweenaw Bay. The site has operated as a service station since the 1960's. The site also includes a former bulk petroleum storage area south of the garage which operated from 1934 through the mid-1980's, according to information available. Former operations included the storage of leaded gasoline, unleaded gasoline, and diesel fuel, in connection with the former bulk storage area, as well as waste oil, automotive fluids, gasoline and diesel in connection with the service station, including two gasoline and one diesel underground storage tanks. Site investigation and sampling was completed in 2000 by the MDEQ. According to existing information soil samples from soil borings indicate that soil directly behind the garage as well as in the vicinity of the former bulk storage area have been impacted. Groundwater samples taken in the vicinity of the former bulk storage area on both sides of a nearby set of railroad tracks indicate that groundwater has been impacted. Surface water sediment samples from a ditch that flows through the property and discharges to Keweenaw Bay did not contain significant levels of contaminants, although lead was detected in all of the sediment samples collected. According to the Michigan Part 201 database contaminants of concern include lead, PCE, and xylenes. The database lists the current status as "interim response is in progress". This facility is also listed on the Michigan UST list as a closed site. PCE is mobile in surface and groundwater, is toxic at low

concentrations, and can be difficult to clean up once released due to its mobility and density. PCE is a suspected human carcinogen.

3. Besse Forest Products – Besse Forest Products, Baraga Lumber Division, is an active lumber mill located along State Highway M-38 in Baraga, Michigan, approximately 1 mile west of Keweenaw Bay. The facility was formerly known as Connor Forest Industries (CFI), who first operated the facility as a saw mill in 1988. Operations included the use of pentachlorophenol (PCP) in dip tanks into which green lumber was dipped. Additionally, petroleum products were used onsite in connection with saw mill operations and stored in a 10,000 gallon diesel underground storage tank and an aboveground fuel oil storage tank. Small quantities of gasoline and mineral spirits were also used for cleaning small parts. Releases of PCP were discovered in the area of the green chain building and green yard, as well as areas of suspected petroleum contamination. Soil excavation conducted at the site has removed the contaminated source soils and groundwater monitoring wells did not detect PCP exceeding the generic residential criteria. During removal of the diesel underground storage tank, a release was detected. Contaminated soils were excavated and removed, and in 1997, DEQ approved a closure of the LUST site for unrestricted residential use. All known areas of PCP and specific areas of petroleum contamination have been remediated to residential cleanup standards. In 1997, the DEQ conducted a review of the property and remediation data and approved a generic residential closure for the property with no restrictions. According to a KBNRD memo, dated July 28, 2005, the level of DEQ oversight of CFI was adequate, known environmental concerns were adequately investigated and remediated, and potential PCP source material has been removed from CFI. Long-term exposure to low levels of PCP can cause damage to the liver, kidneys, blood, and nervous system.

Clearly, the preceding information demonstrates that there is a very real and substantial risk to waters of the Reservation and the health and welfare of KBIC from the regulated facilities present on the Reservation.

KBIC Brownfield Program

The Brownfields Program currently has 14 tribally-owned properties determined to be eligible brownfield sites by EPA (Appendix FF and CC), and has identified 12 non-tribal owned properties for listing as potential Brownfield sites. These include Bovine Station (apparent former gas station), Former L'Anse Township Dump, Lahti's Junkyard, Baraga Muffler (former gas station and auto repair), Beartown #1 (illegal dumping), Beartown #3 (illegal dumping), Beartown #4 (illegal dumping), Beartown #5 (illegal dumping), Baraga Plains 66 (former gas station), Waara-Oliver (suspected former gas station), and Maine Berry's (former gas station) (Appendix FF and CC).

An example of an on Reservation Brownfield property with unaddressed environmental issues is the Draper Lakeshore Property, which was purchased by KBIC in 2004, and is currently listed as a tribal Brownfield property. The property was owned by non-tribal members prior to purchase. A small creek abuts the southern property boundary and discharges to Lake

Superior. Part of the property is wetland. A Phase I Site Investigation was completed in 2004 by KBIC staff prior to purchase. The Phase I/AAI identified that the property had formerly been owned by Standard Oil Company and a local resident interviewed remembered a gas station operating on the property 40-50 years ago. KBIC decided to purchase the property following completion of the Phase I/AAI. Subsequent post-purchase Phase II site investigation by KBNRD staff located underground storage tanks still present which contained what appeared to be old degraded liquid fuel. The USTs were partially crushed. Some contaminated soil was also present. Liquids and contaminated soil were removed, containerized, and disposed of by a licensed waste disposal firm. The USTs were also removed and disposed of and the UST area was confirmed clean upon closure.

The risk to Reservation water resources and all resources which depend upon the waters is substantial from contaminants present at existing and yet-to-be discovered Brownfield properties.

6) Improper Disposal of Industrial/Commercial Waste, including Dumping of 55-gallon Drums in Non-Residential Areas

In 2006, KBIC staff discovered 26 partially crushed 55-gallon drums on a KBIC owned property. (Appendix GG) A disposal contractor was hired to characterize, containerize, and properly dispose of the drums. In 2005, this same contractor also disposed of approximately 900 pounds of heavy equipment lead-acid batteries that had been collected by KBNRD from numerous locations around the area. In July 2010, KBNRD staff discovered two abandoned 55-gallon drums with contents on a KBIC owned property. (Appendix GG) EPA assistance was requested to characterize the contents, and to facilitate disposal of the drums. EPA START contractors mobilized to the site four days after discovery, and collected liquid samples from the drums for laboratory analysis. Limited hazard characterization was performed in the field to assess the physical properties of the liquids within the drums and the drums were placed in 85-gallon over packs. An environmental disposal firm was contracted to dispose of the drums and their contents.

Contaminants released from improper disposal of industrial and commercial wastes are a threat to water quality. Contaminants can leach or runoff to ground waters and surface waters degrading the quality of these waters and negatively impacting all the resources that depend upon high quality water on the reservation. Clearly the improper disposal and dumping of industrial waste is a threat to Reservation water resources and the health and welfare of KBIC.

7) Transportation Threats and Impacts

There are approximately 500 miles of county roads within Baraga County, many of which cross the Reservation. Major roads include US Highway 41 and Michigan Highway M-38. Minor roads include everything from city streets to two-track logging access roads and four-wheeler

trails. Transportation impacts to water quality can be caused by use of sand, road salt and other de-icing chemicals during the winter, improper installation of road crossing culverts and bridges, spring snow-melt runoff, storm water runoff or sediments and other materials, and from contaminants released directly by vehicles using the road.

As noted previously, a number of improperly installed road culverts are acting as dams at road-stream crossings around the Reservation. A survey of 92 major stream crossings for major roadways for watershed in and around the Reservation identified 25 culverts that were barriers to fish movement. (Appendix Q) Barriers included perched, blocked, or crushed culverts. These barriers are affecting 32 miles of perennial rivers and 19 miles of intermittent streams.

Forestry and other land use activities like residential development require construction of new roads, or maintenance of existing roads on the Reservation. The prevalence of wetlands and surface water bodies across the Reservation is such that nearly every road project could potentially affect water quality. Appendix HH contains environmental permit application information for various projects on the Reservation submitted by non-tribal entities to the State of Michigan. Permit applications request authorization to conduct activities that would impact wetlands, streams, and rivers, which are activities that threaten Reservation waters. Potential impacts of road maintenance and construction are many, and include storm water discharge during construction, sediment input into area streams from new roads, wetland dredging or filling resulting in loss of habitat and altered hydrologic systems, introduction of non-native invasives species into new areas, among others. Road construction can disrupt hydrodynamic regimes, fragment habitat or disrupt wildlife corridors. Existing literature supports the conclusion that the impacts of forest roads are “unequivocally negative and widespread”. Forman and Alexander 1998¹, Gucinski, et.al.2001. Wildlife inventory information previously provided demonstrates that a wide variety of plant and wildlife species are found in wetland and riparian habitat on the Reservation. Wetlands are critical resources for natural resources upon which the KBIC depends to maintain their way of life and their traditions. Currently, KBIC has no oversight authority for these projects on the Reservation.

In 2009-2010, a limited scope investigation sampled waters in 36 wetlands on the KBIC reservation. (Appendix HH) Water was analyzed for several basic chemistry parameters that include pH, conductivity, salinity, temperature, and chloride concentration. The objective was to collect preliminary data to determine impact of road salt on amphibian communities. Water with high chloride concentration has been shown to negatively impact northern populations of some amphibian species. Preliminary data shows that chloride concentrations in wetland water, where measured, increased at locations closer to an existing road, and indicate that use of road salt is negatively impacting Reservation water quality.

8) Other Activities and Impact Considerations

Additional activities that threaten the quality of waters on Reservation include non-point source contaminant discharge such as storm water runoff and direct discharge into area water bodies. Storm water discharge has the potential to discharge significant amounts of sediment

or contaminants over very short periods of time. This has previously been discussed in the context of residential development and transportation. The presence of industrial and commercial facilities on the Reservation presents a threat to the quality of Reservation waters from storm water discharges, as do area construction activities and mineral exploration activities.

KBIC has a long tradition of fish harvest and consumption from both Lake Superior and inland waters. Lake Superior fish are under a number of fish consumption advisories for various contaminants. Inland waters in the Reservation area are also under fish consumption advisories for mercury. There can be multiple sources for contaminants causing consumption advisories. Lamprey samples collected by KBNRD and analyzed for mercury were found to have concentrations as high as 6 parts-per-million. Mercury or other contaminants in fish are also a threat to wildlife health, as consumption by mink or otters or other piscivorous species transfers contaminants from the fish species to the consumer species. The KBIC membership is affected by contaminants in fish and by fish advisories since fish is a major component of the community's diet as it has been for many generations. Human health water quality criteria calculated using the national default freshwater/estuarine fish consumption rate of 17.5 grams per day do not provide appropriate protection for KBIC members and it is critical that KBIC have authority to set water quality standards that are relevant and appropriate for protection of Reservation waters and the traditions and practices of tribal membership.

9) Air Deposition of Contaminants such as Mercury and Other Heavy Metals from Off-Reservation and On-Reservation Sources

On June 10, 2011, EPA finalized a Federal Implementation Plan (FIP) to ensure that Clean Air Act permitting requirements are applied consistently to facilities in Indian country. This action will help newly built or expanding industries protect people's health and the environment. This action will fill a regulatory gap by clarifying the permit process for large and small sources and ensuring that any increases in emissions from these facilities will not significantly impact air quality in these areas. This will help provide important environmental protection in Indian Country while supporting economic development. Under the rules, a source owner or operator will need to apply for a permit before building a new facility or expanding an existing one if the facility increases emissions above any of the thresholds included in these rules. The permitting authority, either EPA or a tribe, will review the application and grant or deny the air permit. Permits will be open for public notice and comment as part of the review process. The minor NSR rule applies to all of Indian country. New or modified industrial facilities with a potential to emit equal to or more than the minor NSR thresholds but less than the major NSR thresholds, generally 100 to 250 tons per year (tpy), are "minor sources" of emissions and subject to the rule requirements. Initial evaluation completed by the Inter-Tribal Council of Michigan and KBIC identified 28 facilities within the Reservation boundaries for which the new CAA regulations likely apply. (Appendix II)

CAA permits help control air pollutants such as particle pollution and sulfur dioxide that are associated with numerous health effects including aggravated asthma, increased respiratory symptoms, missed work and school days, hospitalization for heart or lung diseases and even premature death.

Limited scope air quality monitoring has previously been completed by KBNRD on the Reservation due to concerns raised by the membership and Tribal Council. (Appendix II)

Use of household and industrial burn barrels is common on the Reservation. Burn barrels can release dioxins, heavy metals, and other contaminants into the surrounding environment, seriously threatening area water and air quality. Currently there are no regulations governing the use of burn barrels on Reservation.

10) Legacy Mining Impacts, Sand and Gravel Mining, and Potential for Future Impacts from Metallic Sulfide Mining

Legacy Mining Impacts

The Sand Point Brownfield site is located on tribal property and on the Reservation. The general Sand Point area includes a mix of upland, wetland, and surface water bodies, and is several hundred acres in size. (Appendix P) The Sand Point Brownfield site includes an extensive beach area, approximately 45 acres in size, with approximately 2.5 miles of lakefront, on the western shore of the Keweenaw Bay of Lake Superior. This property and surrounding environment has been negatively impacted by historical industrial copper mining processing waste (stamp sands) that originated from the Mass Mill, an early 20th century copper ore processing plant that was located approximately 4 miles north of Sand Point. During copper ore processing at Mass Mill, billions of pounds of stamp sand waste was deposited into Keweenaw Bay. Lake currents have since carried these stamp sands southward and deposited them onto KBIC property at Sand Point. Environmental quality sampling shows the stamp sands have caused copper, mercury, and arsenic contamination in the groundwater, surface water, and sediments in the Sand Point area. Stamp sands are deficient in nutrients and contain near toxic levels of copper and iron which prevent vegetation growth where present in higher concentrations, and diminish vegetation growth in other areas nearby. High concentrations of copper, mercury and arsenic have also been found in fish samples collected in this area.

Since 2004, KBIC has been actively working to mitigate the impact of stamp sands on the environment of the Sand Point area and restore the area to a self sustaining and functioning ecosystem. This is a prime area for tourism, and is an area with great cultural significance to KBIC. KBIC has spent an estimated 1-million dollars on assessment, cleanup, and restoration activities to date at the Sand Point Brownfield site.

Sand and Gravel Mining

Sand and gravel mining has historically occurred on the Reservation and is currently occurring at at least two locations on the Reservation, one of which is owned by a non-tribal member. Sand and gravel mining can result in release of sediment into area waterways, can alter hydrodynamic regimes and can disrupt hydrologic regimes.

Potential Future Metallic Sulfide (Hardrock) Mining

Hardrock Mining Risk Assessment

Section 108(b) of CERCLA requires the promulgation of regulations that require classes of facilities to establish and maintain evidence of financial responsibility consistent with the degree and duration of risk associated with the production, transportation, treatment, storage, or disposal of hazardous substances.

EPA chose hardrock mining facilities as the first class of facilities for which they would develop financial responsibility regulations because “hardrock mining facilities present the type of risk that, in light of EPA’s current assessment, justifies designating such facilities as those for which EPA will first develop financial responsibility requirements pursuant to CERCLA Section 108(b).” (Appendix JJ)

Factors considered when making the selection included, but were not limited to: Annual amounts of hazardous substances released to the environment; the extent of environmental contamination; the number of sites on the CERCLA site inventory; and projected clean-up expenditures. (Appendix JJ)

According to the U.S. EPA “EPA estimates that the hardrock mining industry is responsible for polluting 3,400 miles of streams and 440,000 acres of land.”³ (Appendix JJ) The U.S. Forest Service (USFS) estimates that approximately 10,000 miles of rivers and streams may have been contaminated by acid mine drainage from the metal mining industry.⁴

Using a variety of information sources the EPA found “[at] individual facilities, hardrock mining operations may disturb thousands of acres of land and impact watersheds including effects on ground water, surface water aquatic biota, aquatic and terrestrial vegetation, wetlands, wildlife, soils, air, cultural resources, and humans that use these resources recreationally or for subsistence.”⁵ “Additionally, EPA noted that Hardrock mining facilities reported large releases of many hazardous substances, including ammonia, benzene, chlorine, hydrogen cyanide, hydrogen fluoride, toluene, and xylene, as well as heavymetals and their compounds (e.g., antimony, arsenic, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, vanadium and zinc).”⁶ Similarly, the National Research Council (NRC) has indicated that hazardous substances of particular concern include heavy metals, ammonia, nitrates, and nitrites.⁷ These releases, in some cases, have led to ground and surface water contamination from acid mine drainage and metal leachate, and air quality issues resulting from heavy metal contaminated dust or emissions of gaseous metals from thermal processes.⁸ The resulting acidic and metal contaminated fluids may be acutely or chronically toxic and, when mixed with ground water, surface water and soil, may have harmful effects on humans, fish, animals, and plants.⁹

Conclusively, EPA states “[t]aking all this information into account, EPA concludes that classes of facilities within the hardrock mining industry are those for which EPA should first develop financial responsibility requirements under CERCLA Section 108(b), based upon those facilities’

sheer size; the enormous quantities of waste and other materials exposed to the environment; the wide range of hazardous substances released to the environment; the number of active hardrock mining facilities; the extent of environmental contamination; the number of sites in the CERCLA site inventory, government expenditures, projected clean-up costs and corporate structure and bankruptcy”. (Appendix JJ)

KBIC Reservation

The western portion of the Reservation is within an area identified geologically as the Baraga Basin. (Appendix JJ) Mineral exploration and mining companies currently known to be active in the Baraga Basin include Kennecott Exploration, Bitterroot Resources, TransSuperior Resources, and Prime Meridian.

KBIC does not own all mineral rights beneath the Reservation. (Appendix JJ) Currently there is an active hardrock mining prospect location within the Reservation boundaries. (Appendix JJ) Kennecott Exploration Company, a wholly owned subsidiary of Kennecott Minerals Company, in turn a wholly owned subsidiary of Rio Tinto, is the company actively exploring at this location. This prospect, known by Kennecott as the Bovine Igneous Complex (BIC), is located on private land in Township 50N, Range 32W, Section 19, Baraga County, Michigan. KBIC owned property abuts the BIC Prospect property to the south. Kennecott mineral rights access at this location extend underneath KBIC property.

Additional mineral exploration core drilling has also been completed by another company at a location in Section 25, T-51-N, R-32-W. (Appendix JJ) No further activity has been observed in that area, however, there are no notification requirements for completing mineral exploration and exploration may be occurring at this location and on other private lands on the Reservation without KBIC’s knowledge or consent.

According to Kennecott, the BIC prospect has been a target since the mid-1990’s, with core drilling first completed in 1995. The prospect is described by Kennecott as a small basin-shaped mafic/ultramafic intrusion emplaced in the southwestern part of the Baraga Basin, likely similar in age to the Eagle deposit further to the east where a mine is currently under construction. The deposit has, “...undergone extensive exploration drilling since 1995.” (Appendix JJ) Of interest to Kennecott are areas within the deposit in which metallic sulfide mineralization is present.

The BIC prospect is located in the headwaters area of Gomanche Creek, which is a tributary of the Silver River. The Silver River watershed, including the Gomanche Creek area, is mostly forested and undeveloped, and contains significant wildlife resources which KBIC members depend upon for continuation of our traditional ways of life. Terrestrial wildlife and native plant resources identified on the Reservation have been previously presented. Wetlands are present throughout the Struble property area and provide critical habitat on the Reservation which has also been previously discussed. Gomanche Creek and the Silver River are coldwater

aquatic systems, with diverse macro-invertebrate assemblages, high quality waters, and healthy native brook trout populations.

As noted above the risks to surface water from hardrock mining are serious and substantial. Impacts to surface waters of the reservation from hardrock mining activity presents significant risk to both human health and the environment. The severity of the consequences impacting human health and the environment as a result of releases and exposure of hazardous substances from hardrock mining is evident.

Clearly metallic sulfide mining or hardrock mining, represents a very real and substantial risk to the water resources and the health and welfare of the Keweenaw Bay Indian Community.

The risk for KBIC members is even greater than the risk to the average U.S. resident as considered by the EPA. The conclusion of greater risk for tribal member exposure to contaminants in an area of hardrock mining is supported by evaluation of a mine site in Stevens County, Washington, the Wellpinit Mine Site, which is contaminated by radioactive minerals and heavy metals. A public health assessment was completed by the Agency for Toxic Substance and Disease Registry in 2010.⁸

ATSDR's public health conclusions about potential exposures to environmental contaminants at the Midnite Mine site are as follows:

Exposure to site contaminants (metals or radionuclides) is a public health hazard for individuals who use the mining-affected area for traditional and subsistence activities.

This category indicates that long-term exposure to site contaminants could cause harmful health effects. The specific activities associated with these exposures are as follows:

- Drinking water from drainages and seeps in the mining-affected areas;
- Breathing water vapor generated by heating water from drainages and seeps during sweat lodge ceremonies;
- Accidentally ingesting sediments along seeps and drainages in the mining-affected area;
- Eating terrestrial plants and roots in mining-affected area;
- Eating aquatic plants from drainages in the mining-affected area or from Blue Creek;
- Eating fish from Blue Creek

Exposure to site contaminants is a no apparent public health hazard for individuals who visit the mining-affected area (including Blue Creek), but do not conduct traditional or subsistence activities. This category indicates that human exposure might be occurring, but the exposure is not expected to cause any harmful health effects.

As noted in ASTDR findings, the public health hazard for contaminants at the site are greater for those practicing traditional and subsistence activities, which results in greater connectedness to

the environment, than for those who are not. Such is the situation for KBIC members practicing traditional and subsistence harvest activities on the Reservation.

Summary

The information provided above demonstrates that there are real and significant threats to the water quality of the Reservation and the health and welfare of KBIC from hardrock mining. Clearly there is a need for KBIC to have authority to determine surface water quality standards for all Reservation waters which are appropriate for the KBIC membership and are protective of KBIC membership activities and way of life.

E. Express Delegation from Congress

As previously discussed, KBIC has inherent authority to regulate all waters within the Reservation boundaries. The United States Supreme Court has confirmed that tribes have authority over activities of non-tribal members on fee lands within the boundaries of their reservations if such authority has been delegated to them by Congress. *Montana v. United States*, 452 U.S. 911, 101 S.Ct. 3402 (1981), *Brendale v. Confederated Tribes and Bands of the Yakima Nation*, 493 U.S. 887, 110 S.Ct. 227 (1989), *United States v. Mazurie*, 419 U.S. 544, 95 S.Ct. 710, (1975), *City of Timber Lake v. Cheyenne River Sioux*, 512 U.S. 1236, 114 S.Ct. 2741 (1994).

Information provided in previous sections gives clear evidence of the importance of water quality to KBIC, that the quality of the waters of the KBIC L'Anse Reservation affect both the internal and social relations of tribal life, and impact and potential impact of activities of non-tribal members to water quality presents a direct threat to the health and welfare of KBIC.

In addition to inherent authority, Section 518(e) (2) of the CWA confirms that EPA is authorized to treat an Indian tribe, and thus is authorized to treat KBIC, as a State for purposes of Title II and sections 104, 106, 303, 305, 308, 309, 314, 319, 401, 402, 404, and 406 of the CWA Act to the degree necessary to carry out the objectives of SEC 518(e) (2), but only if (1) the Indian tribe has a governing body carrying out substantial governmental duties and powers; (2) the functions to be exercised by the Indian tribe pertain to the management and protection of water resources which are held by an Indian tribe, held by the United States in trust for Indians, held by a member of an Indian tribe if such property interest is subject to a trust for Indians, held by a member of an Indian tribe if such property interest is subject to a trust restriction on alienation, or otherwise within the borders of an Indian reservation; and (3) the Indian tribe is reasonably expected to be capable, in the Administrator's judgment, of carrying out the functions to be exercised in a manner consistent with the terms and purposes of this Act and of all applicable regulations. Material included within this application meets the requirements of Section 518 (e) (2).

F. Demonstrated Need for KBIC Jurisdiction

The State of Michigan has issued many budget cuts over the last few years that have cut their work force within the DEQ by as much as 50 percent. They are now in the bottom 5 states for spending on their environmental department. A reporter in 2007 found that Michigan allocates .04 percent of their annual general fund to the DEQ. So with so little money and effort going into its environmental programs and the bulk of that utilized in Lower Michigan it is obvious that there is a serious need for KBIC to assert its jurisdictional authority with the L'Anse Reservation boundaries. We have provided 4 news stories (Appendix DD) as reference to our assertion.

G. Surface Waters to be Regulated

Surface waters for which KBIC intends to set water quality standards include all surface waters of the reservation that meet the EPA's regulatory definition of "Waters of the United States." (See Appendices B and P)

V. TRIBAL CAPACITY

Regulations at 40 CFR S 131.8(b)(4) require KBIC to provide a narrative statement describing the tribe's capacity to administer an effective water quality program. This statement is to include a description of the Tribe's previous management experience; a list of existing environmental or public health programs administered by the Tribe's governing body; a description of the entity (or entities) which exercise the executive, legislative, and judicial functions of the Tribe's government; a description of the existing or proposed agency of the Tribe which will assume primary standards; and a description of the technical and administrative capabilities of the staff to administer and manage an effective water quality standards program, including information about how the Tribe will fund the program.

A. Management Experience

The KBIC Government currently employs approximately 300 people. In addition, approximately 400 people are employed by Tribal Enterprises. KBIC manages a wide range of programs including those authorized by the Indian Self-Determination and Education Assistance Act contract and compact programs. (See section III C and Appendix KK) Government structure and chain-of-command is provided in Appendix F.

Government finances are audited annually by an independent third party. The KBIC's bookkeeping, accounting, and internal controls comply with the standards as set forth in Title 25, Chapter 1, of the code of Federal Regulation, Part 279.7.

1. Existing Environmental and Public Health Programs

- a. KBIC Natural Resource Department

KBNRD was organized in 1999, to administer environmental and natural resource programs within one department. Some KBNRD information is provided in Appendix LL. The department has expanded since inception and currently consists of the following staff positions:

Natural Resource Director
Fish and Wildlife Biologist
Tribal Wildlife Biologist
Tribal Wildlife Technician
Natural Resources Specialist
Water Resources Specialist
Water Resources Technician
Environmental Response Program Specialist
Environmental Specialist
Air Quality Specialist
Lake Superior Program Coordinator
Mining Technical Assistant
Native Plant Technician
Hatchery Technicians (2)
Maintenance Technician
Operations and Compliance Specialist

KBNRD uses the IRMP and the Strategic Plan as guidance for activities and programs. Funding for programs comes from a variety of sources that includes Tribal General Revenue funds, Self Determination Act funding from the Bureau of Indian Affairs, and programmatic and grant funding received from the BIA, EPA, USDA, USFWS, USGS, and other agencies and organizations.

KBNRD fish, wildlife, and native plant programs include:

- a) Aquaculture and stocking operations for lake trout, brook trout, and walleye in Lake Superior and inland waters of the Reservation and ceded territories.
 - b) Fishery assessment and monitoring for Reservation and ceded territory waters.
 - c) Wildlife population assessment and monitoring, and enhancement for Reservation and ceded territory areas.
 - d) Fish and wildlife habitat assessment, habitat monitoring, and habitat protection, restoration, and enhancements.
 - e) Greenhouse operations, native plant restoration, habitat assessment, and inventory and monitoring.
 - f) Fish and wildlife health monitoring and disease surveillance.
 - g) Invasive species inventory, monitoring, and control.

- h) Wetland inventory, assessment, monitoring, and enhancement.
- i) Fish, wildlife, and native plants management planning.
- j) Commercial fishery oversight and management.
- k) Participation in local and regional management efforts and science forums.
- l) Education and outreach.

KBNRD environmental programs include:

- a) EPA General Assistance Program (GAP) providing solid waste program services, radon monitoring, environmental and technical permitting assistance, renewable energy policy development, recycling program technical services, and other general environmental assistance to KBIC.
- b) Tribal Response Program for development and implementation of Brownfield site survey and inventory, oversight and enforcement, public participation, mechanisms for approval of cleanup plans and cleanup verification, and update and maintenance of a public record. The Response Program also includes assessment and cleanup of potentially contaminated properties and properties with known contamination.
- c) Lake Superior Management Plan participation and implementation.
- d) Household hazardous and special waste collections.
- e) Environmental outreach and education.
- f) Clean Water Program; The KBNRD Water Resources Program began in the 1990's. Currently, the Water Resources Program employs two staff members who are responsible for surface water monitoring on the L'Anse and Ontonagon reservations, watershed inventories, aquifer studies, tribal member residential well sampling, cooperative stream gauging work with the USGS, outreach and education, surface and groundwater protection efforts, and participation in various workgroups and regional water quality forums and committees.
- g) Air Quality Program (CAA Section 103 funding) providing capacity by employing and training one staff member to conduct a Basic Air Quality Assessment, Emissions Inventory, air quality complaint tracking system, and educational outreach.

b. KBIC Tribal Court

In 1973, the Tribal Council, as authorized by the Constitution, established a Tribal Court for the purposes of administering justice. A Chief Judge is responsible for oversight and administration of the Tribal Court. The Tribal Court is an independent branch of the KBIC government, and interprets the laws and ordinances passed by the Tribal Council. These laws and ordinances are compiled in codified form in the KBIC Tribal Code. The Tribal Court exercises criminal jurisdiction over KBIC tribal members and members from other federally recognized tribes within the boundaries of the KBIC Reservation. Criminal jurisdiction over tribal members extends to the ceded territories for hunting, fishing, trapping, and gathering regulation enforcement. Appeals are heard by the Appellate Division of the Court.

c. Public Health Programs

KBIC has established and maintains public health programs including surface water monitoring, ground water protection, residential well sampling, solid waste and household hazardous waste collection and disposal, air quality, waste water systems, septic systems, and public water supply.

Surface Water Baseline Data Collection and Monitoring

From 2000 to 2005, the KBNRD Water Program staff completed baseline water quality sampling for surface waters of the Reservation. Since 2005, staff have been completing quarterly monitoring of Reservation surface waters.

Since 2001, KBIC and the USGS have partnered on operation and maintenance of a stream gauge located at the Skanee Road – Silver River intersection. Since that time two additional stream gauges have been installed in the Silver River watershed, one on Gomanche Creek, and one on the East Branch Silver River. All three gauges are currently operating and collecting real-time water quality and discharge data.

Protection of Groundwater as a Drinking Water Supply

KBIC worked cooperatively with the USGS to complete Source Water Assessment and Protection Plans for the Zeba Public Water Supply Plant and the Kawbawgam Road Public Water Supply Plant. (Appendix H)

From 2005 to 2010, KBNRD working with contractors, completed 33 well abandonments on the Reservation, permanently sealing unused tribal residential wells and one unused industrial well to protect ground water supplies.

Residential Well Sampling

KBNRD has been sampling tribal residential wells since the 1990's for standard parameters and drinking water parameters of concern. KBIC and IHS work cooperatively to address problems with tribal member residential wells when problems are detected.

Starting in 2009, KBNRD, working cooperatively with IHS, has been sampling tribal member residential wells specifically for uranium. Uranium in drinking water is a potential health threat and is known to occur in some areas on and around the Reservation. KBIC and IHS are currently working to address problems identified.

Spring Cleanup, Curbside Pickup, Hazardous and Electronic Waste Collection

KBIC has been providing a bulky waste collection for KBIC Tribal Members regularly in the spring of each year for the past several years. Since 2011, KBIC has provided curbside collection of bulky waste in addition to drop-off collection during Spring Cleanup. Since 2004, KBIC has collected and properly disposed of over 900 tons of waste.

Since 2009, the KBOHA has provided curbside collection of household solid waste for tribal members residing in and near KBOHA housing developments. In 2012, KBOHA expanded service to non-tribal members residing within and near the Village of Baraga when Waste Management, Inc. stopped offering service in those areas. The KBIC Tribal Council instituted an Adopt A Road Program. Additionally, in 2013, KBOHA expanded infrastructure in order to expand service.

KBIC provides household hazardous waste collection service for tribal members as funding is available. From 2005 through 2007, KBIC partnered with the Superior Watershed Partnership, the Cedar Tree Institute, and UP faith based organizations in a unique series of Upper Peninsula wide Clean Sweep events for collection of household hazardous waste, used electronics, and pharmaceuticals. In 2008 and 2009, KBNRD hosted household hazardous waste collection events on the Reservation for tribal members. Since 2010, KBNRD has been hosting household hazardous and electronic waste collection events for all Baraga County residents, as well as hazardous and electronic waste collection from Baraga County school, churches, and businesses. To date KBIC has collected 90,515 pounds of household hazardous and electronic waste for disposal. The KBIC Tribal Police Department in conjunction with the DEA has conducted two Prescription Drug Take Back Events. Future events will be held on an as needed basis.

KBNRD and the Health Department coordinated a thermometer exchange program at the Donald A. LaPointe Health Care Facility in Baraga, where KBIC members could exchange mercury containing thermometers for a new digital thermometer that was mercury and toxin free.

KBNRD coordinated collection and disposal of old mercury containing fluorescent light bulbs from KBIC Government offices using Waste Management's Lamp Tracker Fluorescent lamp Recycling Program.

As noted above, in 2006, KBIC collected 242 tons of solid waste from seven illegal dumping locations and hauled it to the Houghton transfer station for disposal. KBNRD has identified 32 additional dumps on the Reservation and will be working with IHS in 2013 to clean up these dumps and mitigate any environmental impact created by the dumps.

Air Quality

KBIC is working to establish baseline data in order to better understand and address air quality issues in the area. By establishing an air program, the Tribe can move forward in accomplishing

its environmental goals and eventually obtaining Clean Air Act program delegation through the Tribal Authority Rule.

The Keweenaw Bay Indian Community is currently working under its first Tribal Air Program. A basic air quality assessment was completed in fall 2012 and an air quality survey was mailed to local tribal members in late 2012. Results from the returned surveys provided important data and insight into local issues. Currently, a quality assurance project plan is being developed in order to complete an emissions inventory.

KBNRD has regularly provided radon test kits free to tribal members for residential radon monitoring. In addition, KBNRD has a radon monitor available for longer term testing and provides testing services upon request of a tribal member.

Sewer, Wastewater, and Water Supply

KBIC currently owns and maintains approximately 16,500 linear feet of sewer lines in the community of Zeba, and 23,177 linear feet of sewer line in a neighborhood east of L'Anse around the intersections of Brewery Road and Vuk Road. Wastewater treatment is completed by the Village of L'Anse, Waste Water Treatment Plant, under a cooperative agreement with KBIC.

KBIC currently owns and maintains approximately 14,501 linear feet of water lines in the community of Zeba. KBIC also owns and operates the Zeba Water Plant, the Zeba Water Tower, and associated structures.

The most recent IHS annual sanitary survey of KBIC water and wastewater systems is provided in Appendix MM.

KBIC and IHS work cooperatively to design and install residential water supply wells and septic systems for tribal members on the Reservation. As noted previously, an inventory of tribal septic systems on the Reservation is scheduled to begin in 2013 to determine the status and fitness of existing systems.

B. Executive, Legislative, and Judicial Functions

The KBIC Constitution provides the KBIC Tribal Council with legislative, executive, and judicial authority. Judicial authority was transferred to the KBIC Tribal Court in 1972 as authorized by the Constitution, for the purposes of administering justice. Additional independent entities established by the Council include the Ojibwa Housing Authority and the Ojibwa Community College.

Various Tribal Council authorities have been delegated to the Executive Council, the Council President, the Chief Executive Officer(CEO), and boards, committees, and government

departments. The Council retains legislative authority and retains authority over operation of the executive branch. Decisions made by the Executive Council, the Council President, the Chief Executive Officer (CEO), and boards, committees, and government departments are subject to Tribal Council review. Some decisions are subject to initial review by Council President, the CEO, and Department Heads, prior to any review by the Tribal Council. The independence of the Tribal Court provides for judicial review of KBIC Tribal Council actions.

The structure and operation of KBIC government provides for multiple tiers of administrative review for decisions made by KBIC government.

C. Administrative Agency

Administration of Tribal Water Quality Standards will occur through KBNRD. Existing water program staff, consisting of the Water Resource Specialist and the Water Resource Technician, will administer the 401 certification program. Water Program staff will continue to be supervised by the Natural Resource Director who is supervised by the CEO.

Upon review of a proposed permit, staff will certify that the permit is consistent with Tribal water quality standards and goals, or deny the permit. Staff will not waive the certification. Review procedures will be followed as stated in Section 401 with consultation with involved parties as to timeline requirements. Appeals will be available through the Tribal Court System.

D. Technical and Administrative Capabilities

KBIC Water Program staffs have qualifications and technical expertise necessary to accomplish tasks required for setting and administering water quality standards. Water Program job descriptions and qualifications are attached in Appendix NN.

KBIC intends to fund the water quality standards program through a combination of BIA 638 Water Program funding, USEPA 106 funds, and Tribal funds. The existing Water Resources Office staff will administer the 303 and 401 programs. KBIC Law Enforcement, funded through BIA Self Determination contract, enforces Tribal regulations and will issue citations for violators. The Tribal Attorney's Office which houses the Tribal Prosecutor is currently funded through Self Determination Act Indirect funding and through KBIC general revenue funds.

VI. Attorney Statement

Regulations at 40 C.F.R. §131.9(b)(3)(ii) require a statement by KBIC's legal counsel or equivalent official which describes the basis for assertion of authority for TAS pursuant to the CWA Section 518 (33 USC S 1377(e) and 40 CRF S 131.8(a)) to implement a water quality

standards program under the CWA S 303 (33 USC S 1313) and to adopt and implement the certification program found at CWA S 401 (33 USC S 1341).

References

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